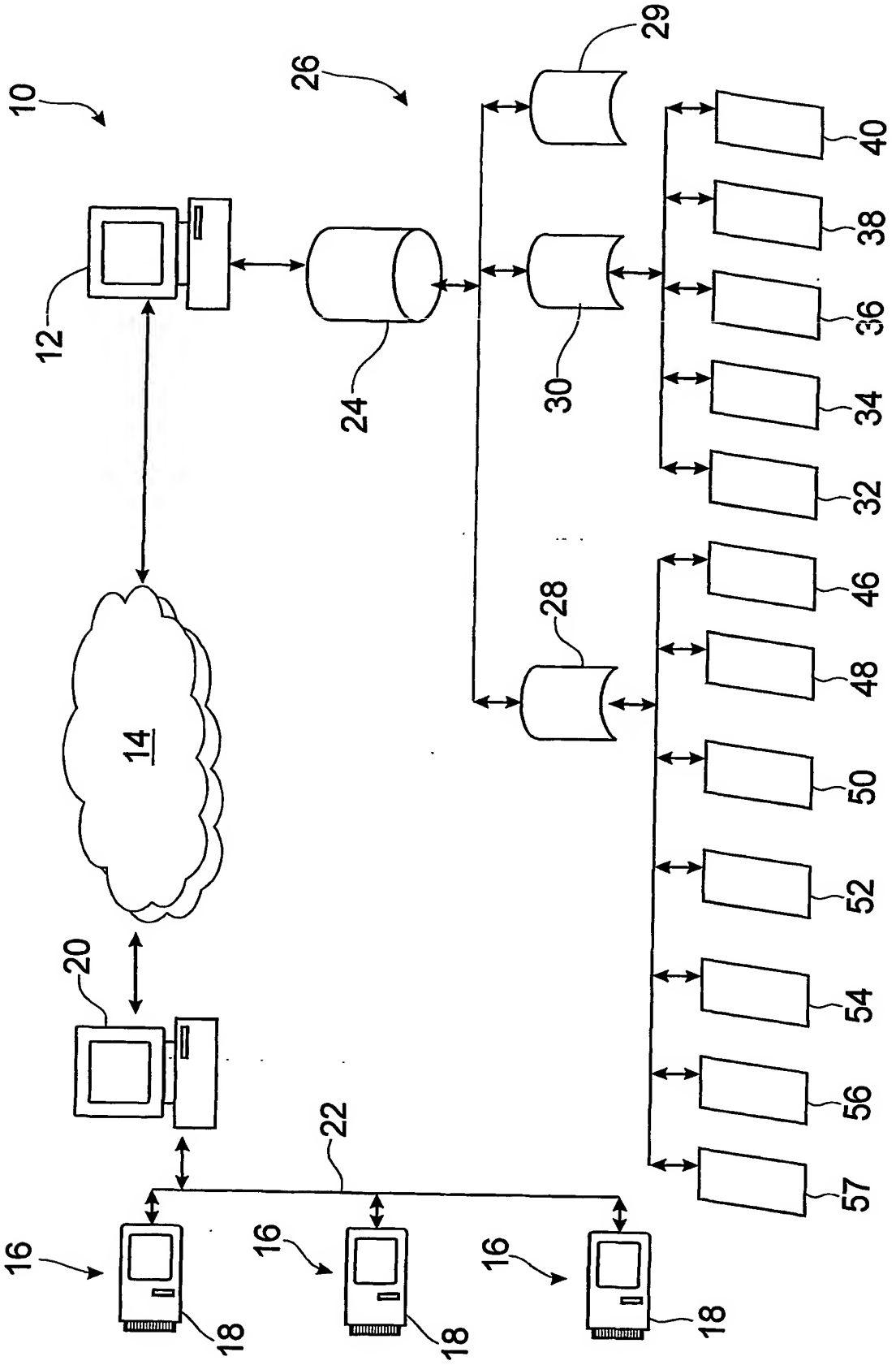


FIG. 1

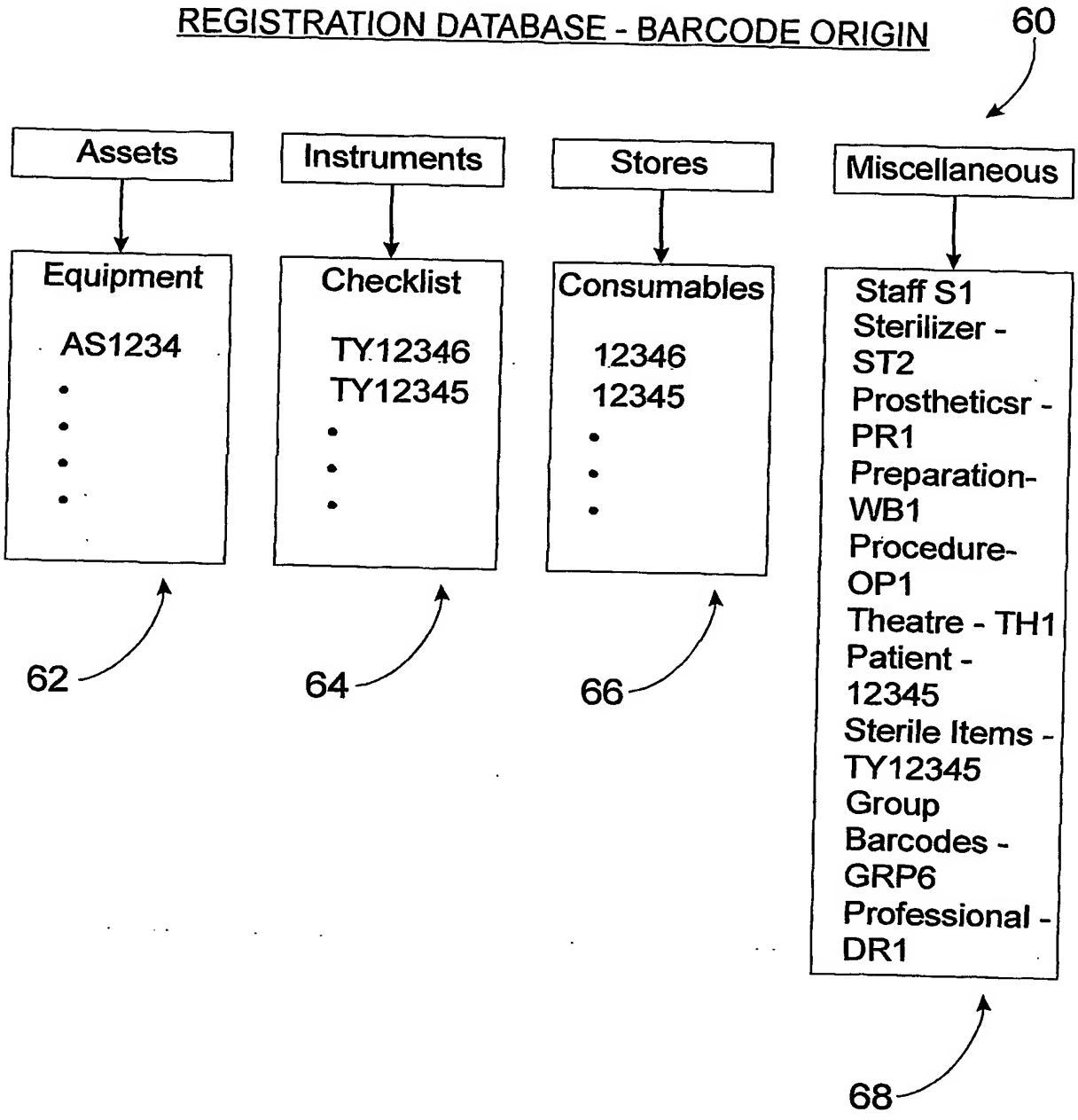

REGISTRATION DATABASE - BARCODE ORIGIN
60
Assets
Instruments
Stores
Miscellaneous
Equipment
AS1234
Checklist
TY12346
TY12345
Consumables
12346
12345
Staff S1
Sterilizer - ST2
Prostheticsr - PR1
Preparation- WB1
Procedure- OP1
Theatre - TH1
Patient - 12345
Sterile Items - TY12345
Group Barcodes - GRP6
Professional - DR1
62
64
66
68

Fig. 2

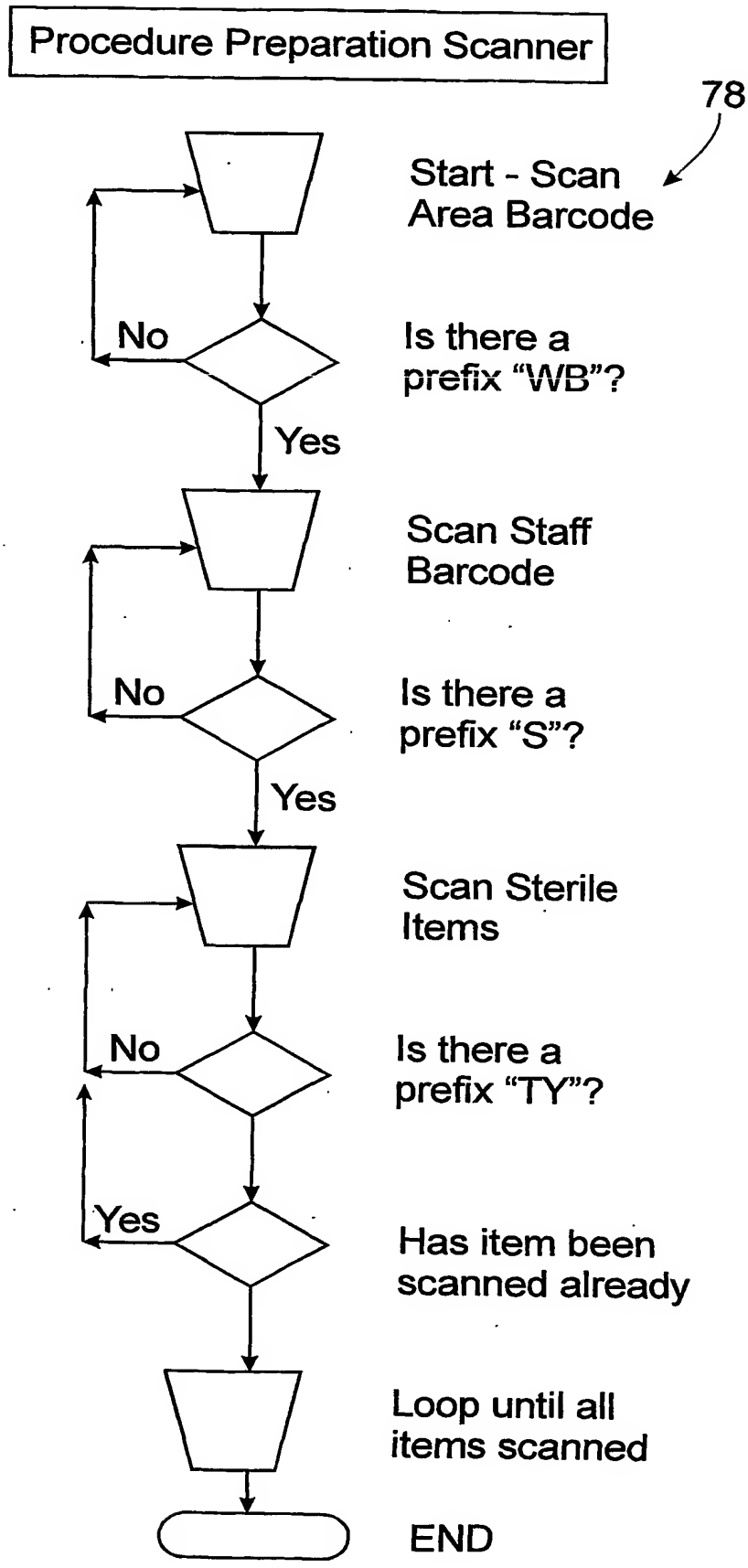

Procedure Preparation Scanner
78
Start - Scan Area Barcode
No
Is there a prefix "WB"?
Yes
Scan Staff Barcode
No
Is there a prefix "S"?
Yes
Scan Sterile Items
No
Is there a prefix "TY"?
Yes
Has item been scanned already
Loop until all items scanned
END

FIG. 3

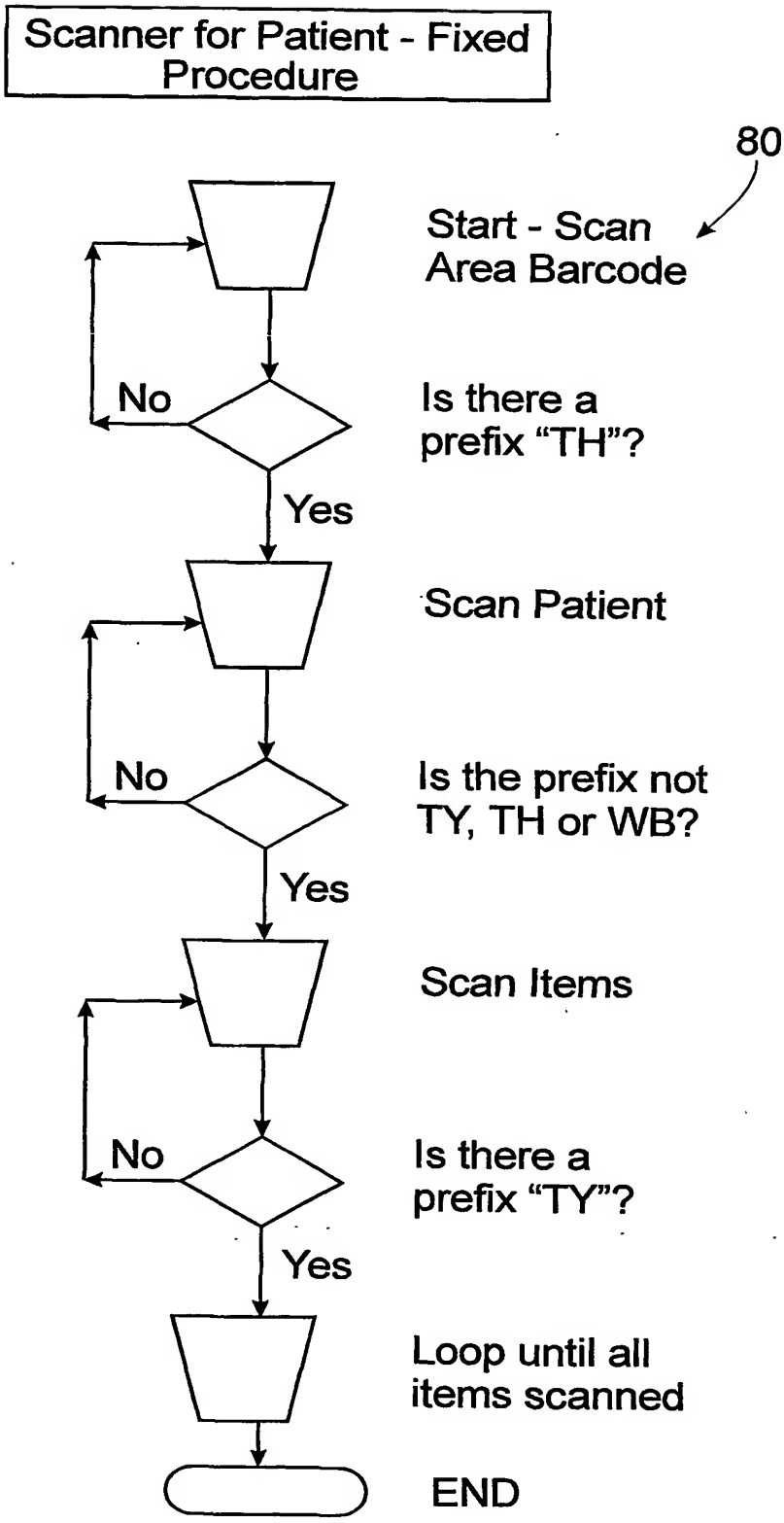

Scanner for Patient - Fixed Procedure
80
Start - Scan Area Barcode
No
Is there a prefix "TH"?
Yes
Scan Patient
No
Is the prefix not TY, TH or WB?
Yes
Scan Items
No
Is there a prefix "TY"?
Yes
Loop until all items scanned
END

FIG. 4

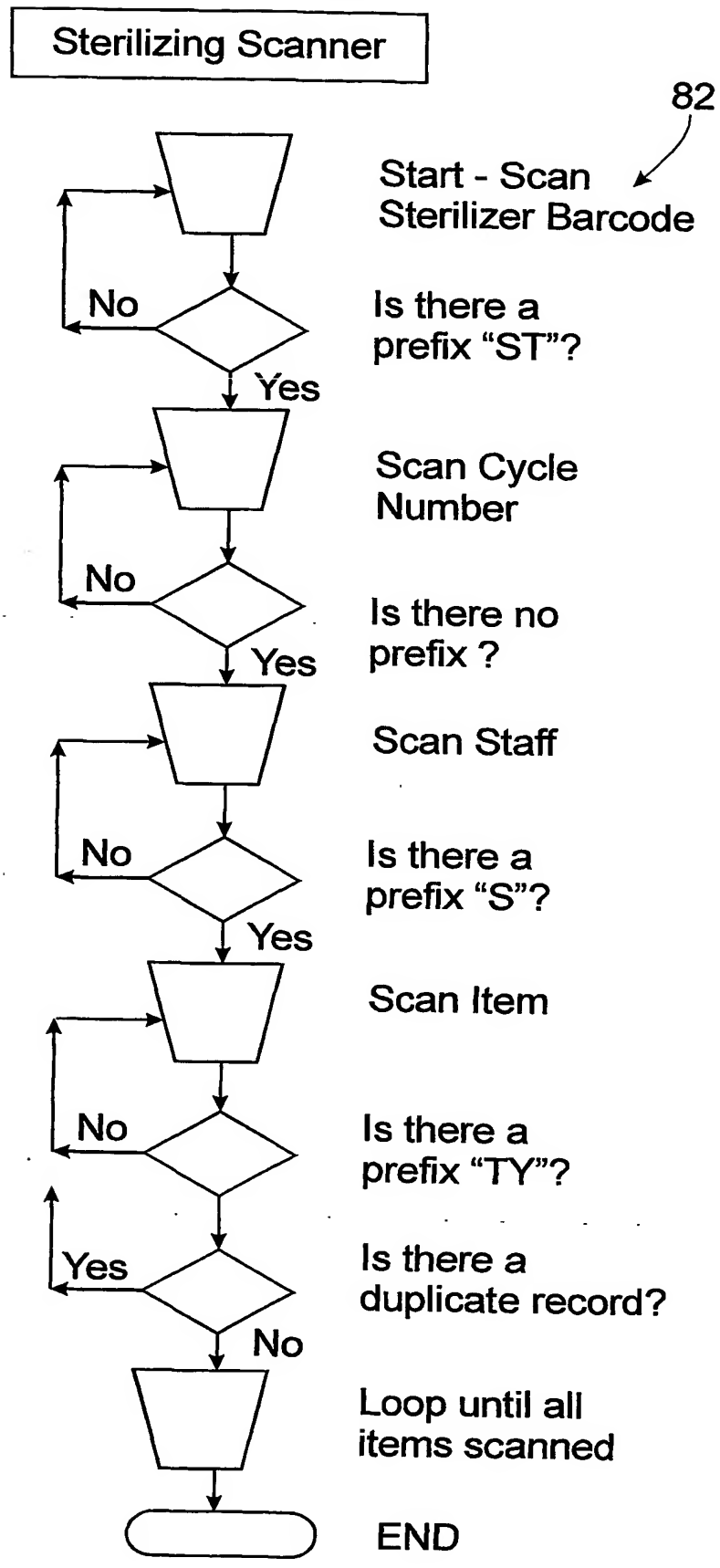

Sterilizing Scanner
82
Start - Scan Sterilizer Barcode
No
Is there a prefix "ST"?
Yes
Scan Cycle Number
No
Is there no prefix ?
Yes
Scan Staff
No
Is there a prefix "S"?
Yes
Scan Item
No
Is there a prefix "TY"?
Yes
Is there a duplicate record?
No
Loop until all items scanned
END

FIG. 5

Scanner for Fixed Procedure

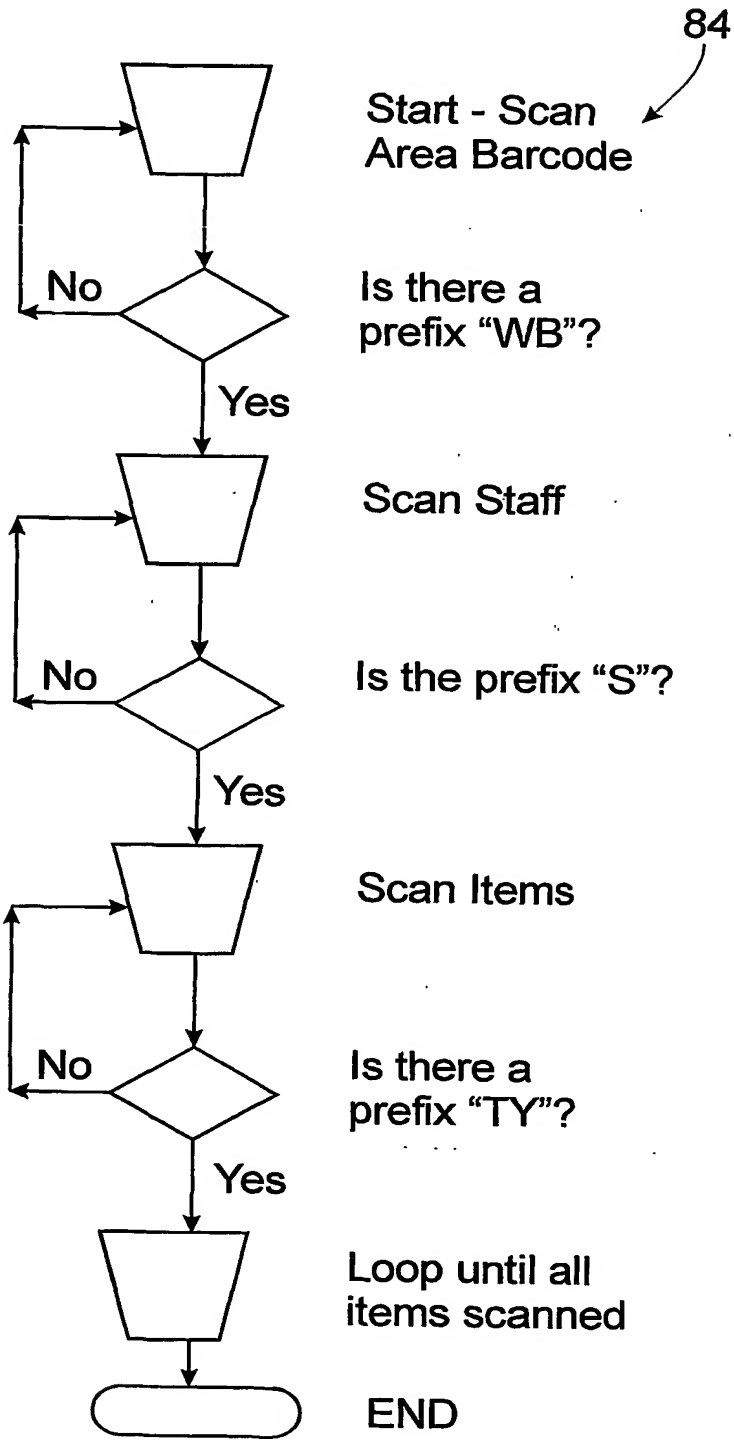


FIG. 6

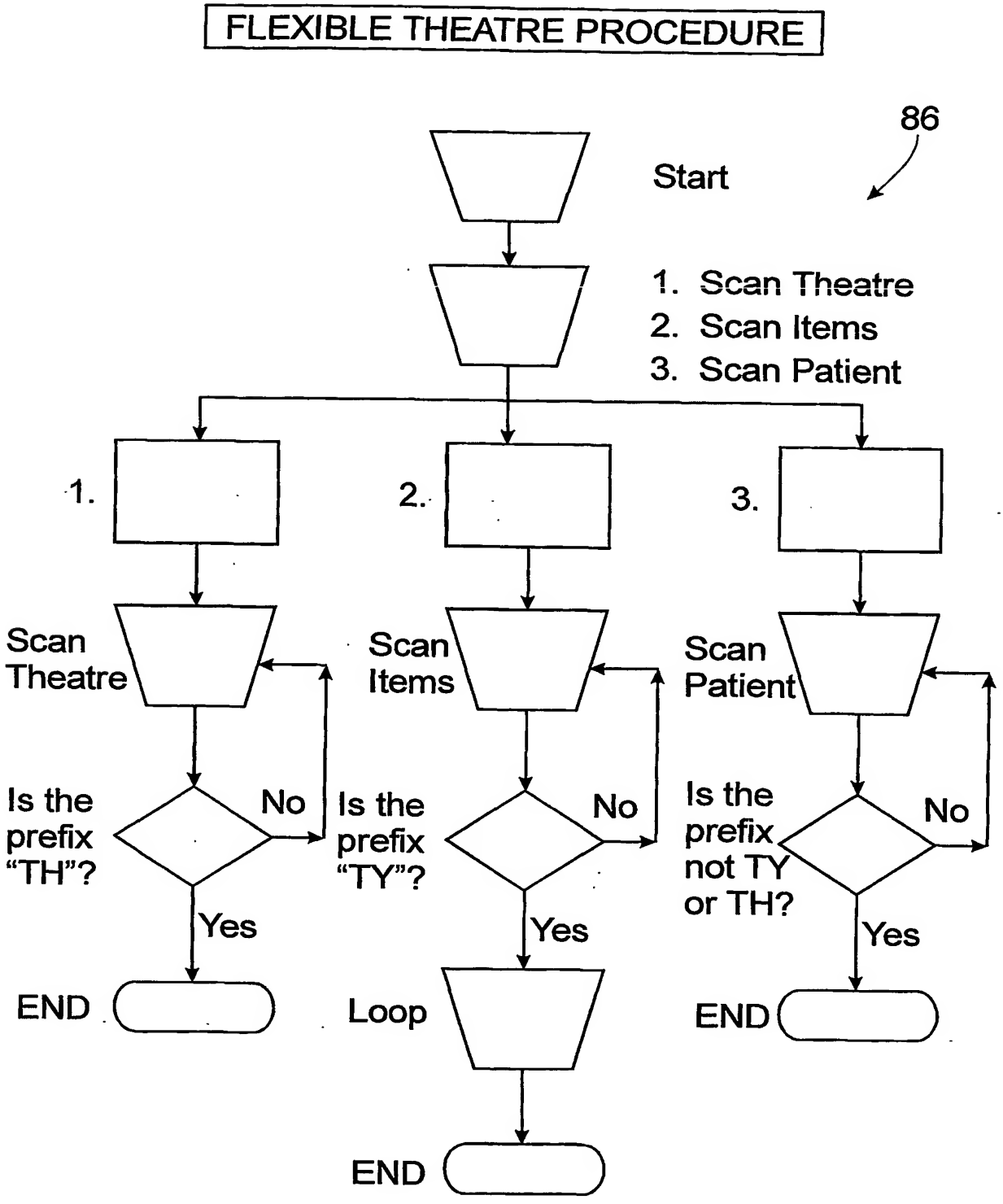

FLEXIBLE THEATRE PROCEDURE
86
Start
1. Scan Theatre
2. Scan Items
3. Scan Patient
1.
2.
3.
Scan Theatre
Scan Items
Scan Patient
Is the prefix "TH"?
No
Yes
END
Is the prefix "TY"?
No
Yes
Loop
END
Is the prefix not TY or TH?
No
Yes
END

FIG. 7

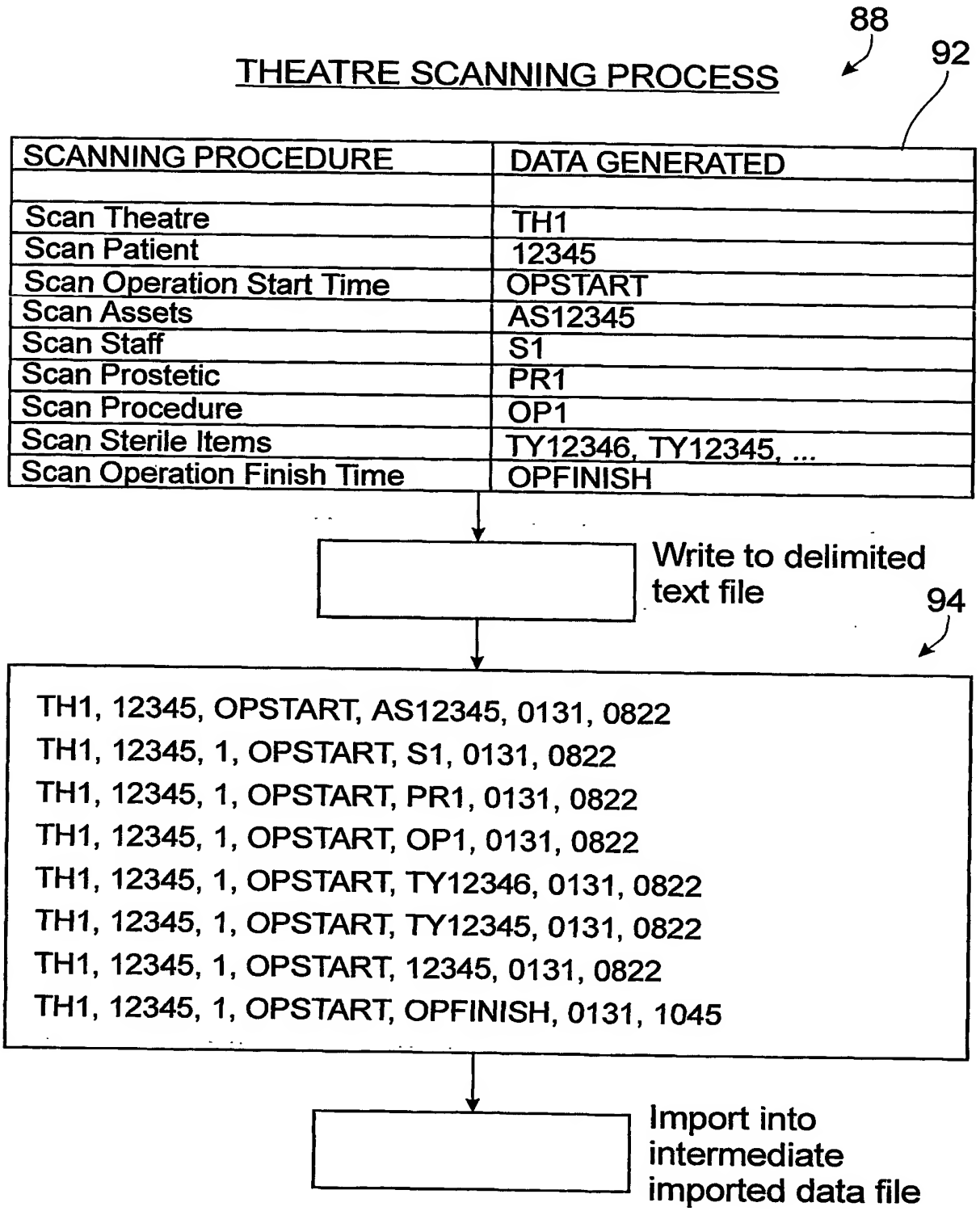

88
92
THEATRE SCANNING PROCESS
SCANNING PROCEDURE
DATA GENERATED
Scan Theatre
TH1
Scan Patient
12345
Scan Operation Start Time
OPSTART
Scan Assets
AS12345
Scan Staff
S1
Scan Prostetic
PR1
Scan Procedure
OP1
Scan Sterile Items
TY12346, TY12345, ...
Scan Operation Finish Time
OPFINISH
Write to delimited text file
94
TH1, 12345, OPSTART, AS12345, 0131, 0822
TH1, 12345, 1, OPSTART, S1, 0131, 0822
TH1, 12345, 1, OPSTART, PR1, 0131, 0822
TH1, 12345, 1, OPSTART, OP1, 0131, 0822
TH1, 12345, 1, OPSTART, TY12346, 0131, 0822
TH1, 12345, 1, OPSTART, TY12345, 0131, 0822
TH1, 12345, 1, OPSTART, 12345, 0131, 0822
TH1, 12345, 1, OPSTART, OPFINISH, 0131, 1045
Import into intermediate imported data file

FIG. 8

90

INTERMEDIATE IMPORTED DATA TABLE

	96.1 Location ID	96.2 Patient ID	96.3 Operation ID	96.4 General	96.5 Date & Time
98.1					
98.2	TH1	12345	NULL	PR1	31/01/03; 08:22:00
98.3	TH1	12345	NULL	TY12346	
98.4				TY12345	
98.5				GRP6	
98.6					

FIG. 9A

Process intermediate imported data table

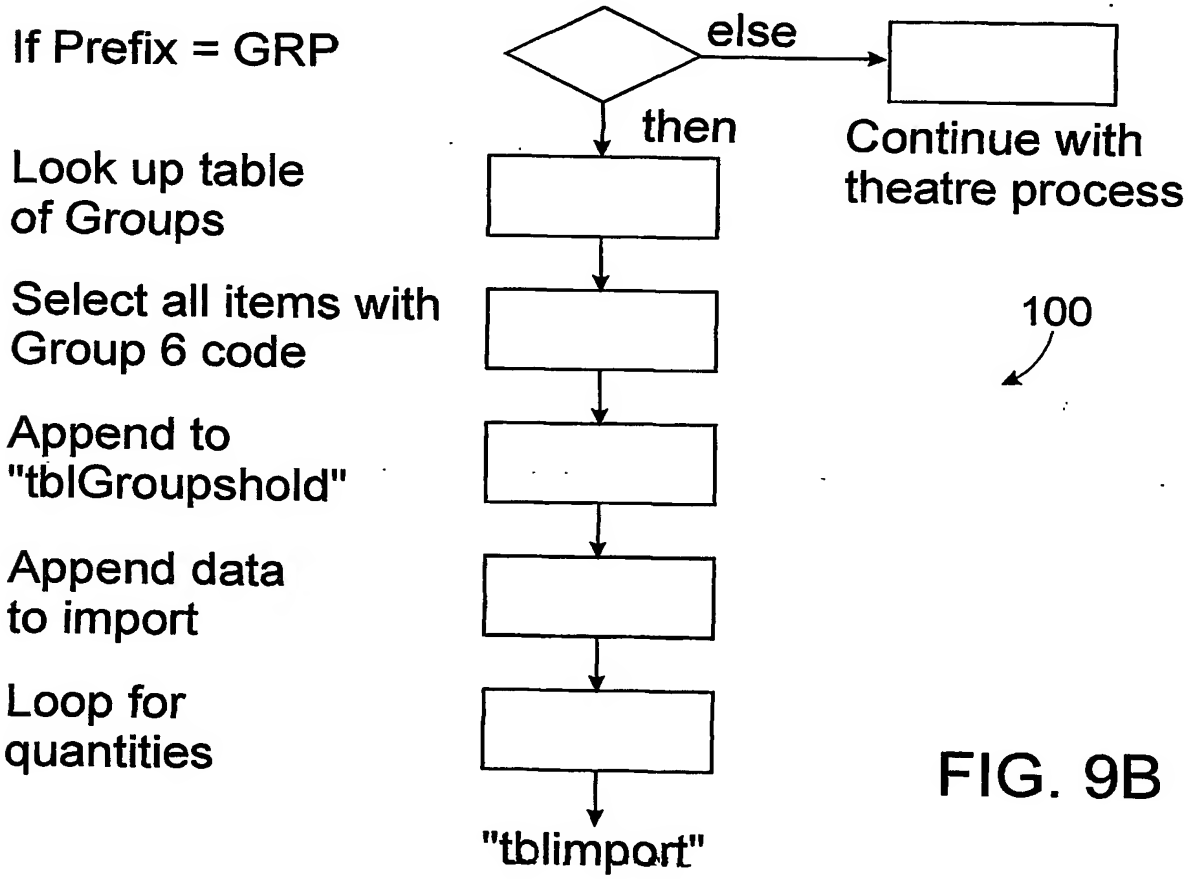


FIG. 9B

IMPORTED DATA TABLE 102

Location ID	Patient ID	Operation ID	General	Date & Time
TH1	12345	NULL	PR1	31/01/03 08.22.00
"	"	"	TY12346	"
"	"	"	TY12345	"
"	"	OP1	AS3	"
"	"	OP1	57	"
"	"	OP1	S6	"
"	"	OP1	AS4	"
"	"	OP1	143	"
"	"	OP1	DR1	"
"	"	OP1	OPSTART	31/01/03 08.22.00
"	"	OP1	OPFINISH	31/01/03 08.45.23

FIG. 10A

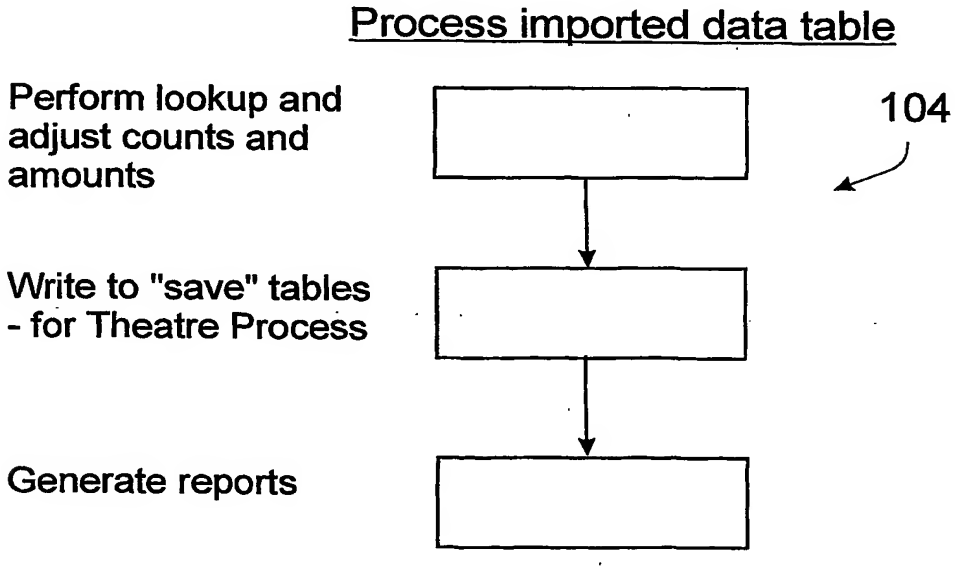


FIG. 10B

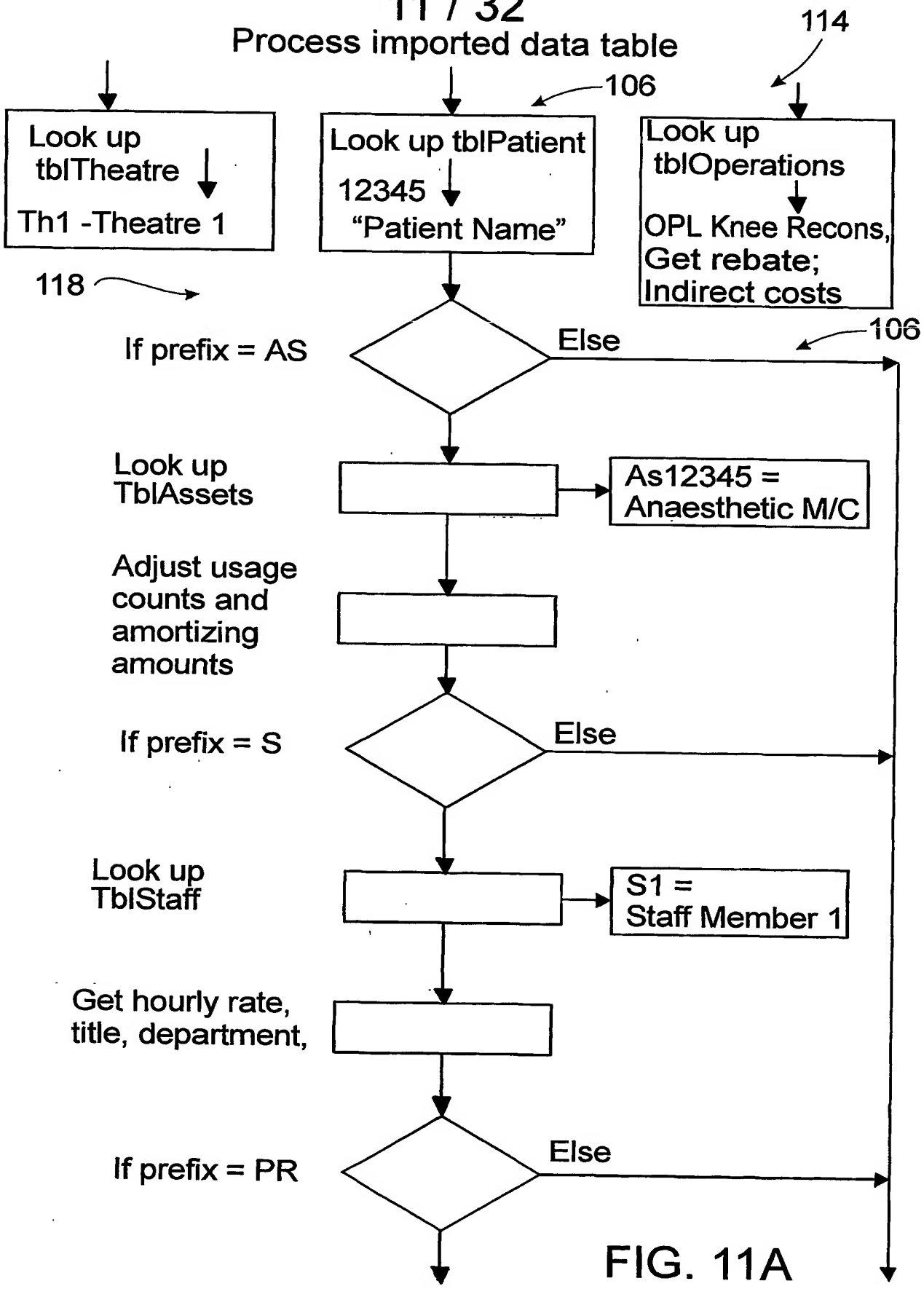

Process imported data table
114
106
Look up tblTheatre
Th1 -Theatre 1
Look up tblPatient
12345
"Patient Name"
Look up tblOperations
OPL Knee Recons, Get rebate; Indirect costs
118
If prefix = AS
Else
106
Look up TblAssets
As12345 = Anaesthetic M/C
Adjust usage counts and amortizing amounts
If prefix = S
Else
Look up TblStaff
S1 = Staff Member 1
Get hourly rate, title, department,
If prefix = PR
Else

FIG. 11A

Process imported data table (continued)

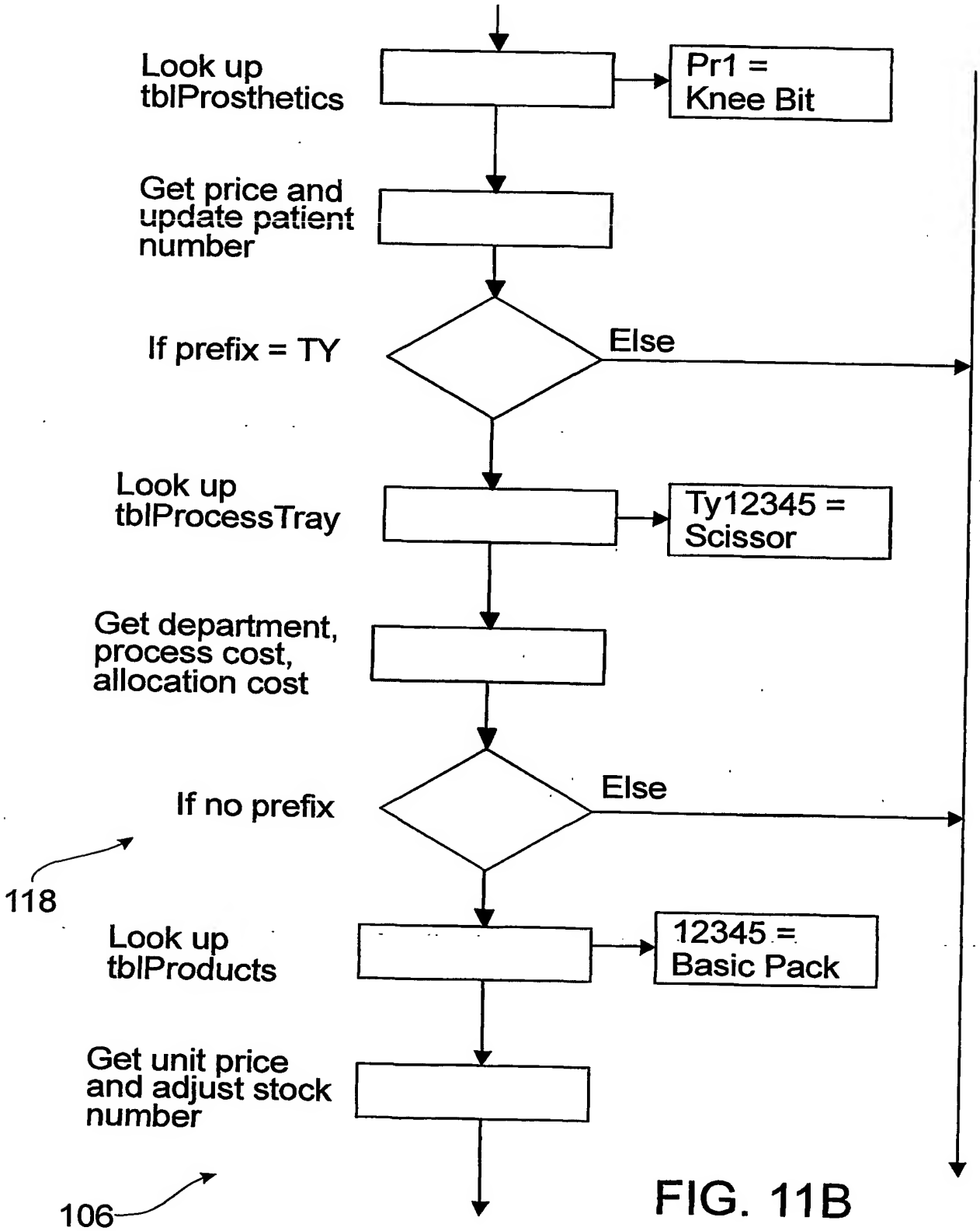


FIG. 11B

Process imported data table (continued)

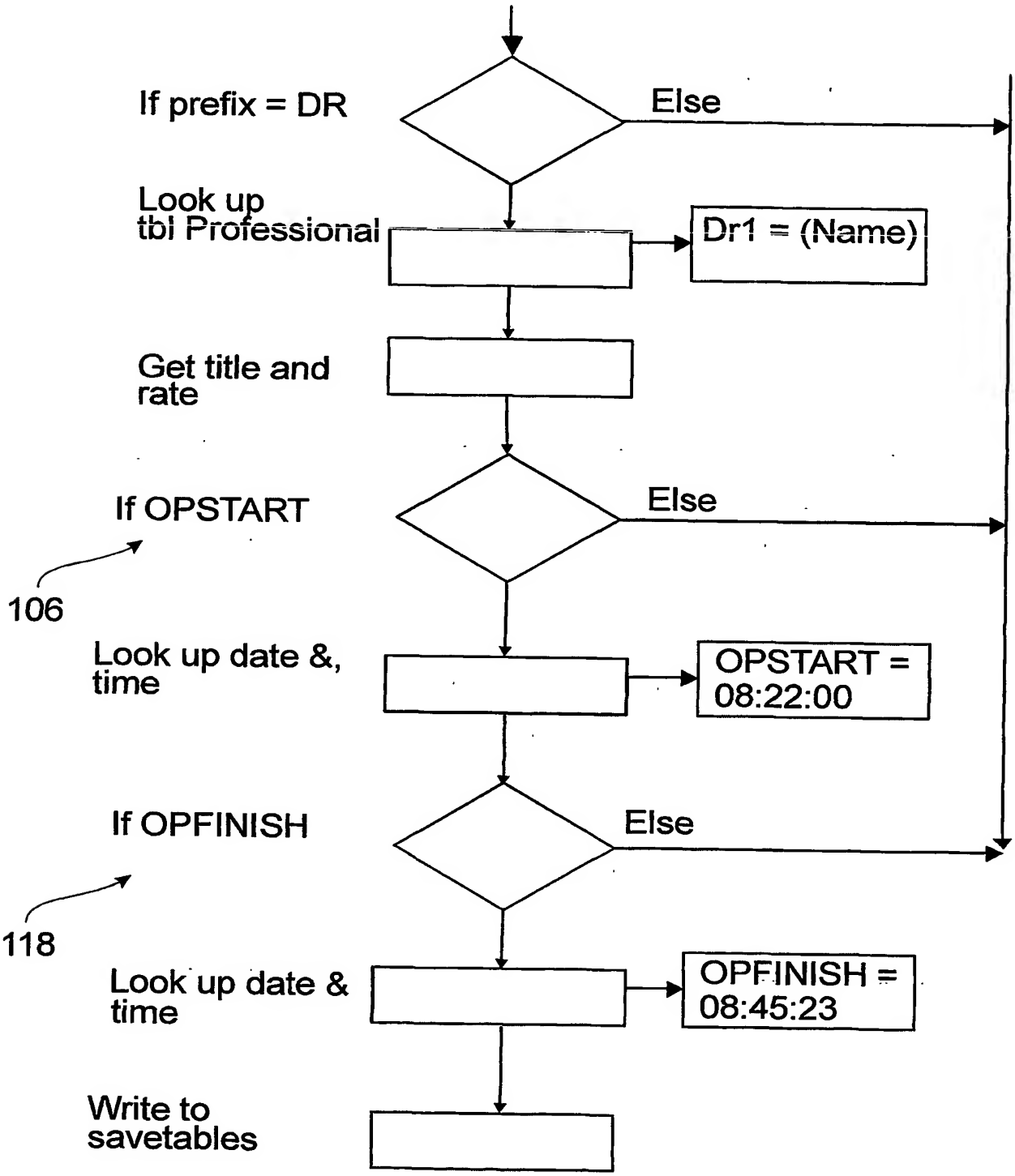


FIG. 11C

Process imported data table (continued)

112 → **tblSave PatientDetails**

Op Number	Location	Patient	General	Date Time	First Name	Surname	Theatre
1	TH1	12345	OPSTART	31/01/03 8:22:00			Theatre 1
2							

FIG. 12

116 → **tblSave Operations**

OpNumber	OpCode	OpName	Rebate	IndirectCost
1	OP1	Knee Recon		
2				

FIG. 13

128 → **tblSave Assets**

OpNumber	Code	Name	Allocation Cost	Amortizing Uses
1	AS12345	Anaesthetic M/C		27
2				

FIG. 14

124 → **tblSave ProcessTray**

Op Number	Tray Number	Tray Name	Dept.	Process Cost	Allocation Cost
1	TY12345	Scissor	Theatre		
1	TY12346	Forcep	Theatre		
...					
2					

FIG. 15

125 → **tblSave Professional**

Op Number	Professional Code	Professional Name	Title	Rate
1	DR1	Surgeon	Mr	

FIG. 16

Process imported data table (continued)

126

tblSaveProducts

OpNumber	Product No.	Name	Serial No.	Unit Price
1	12345	Basic Pack	HIT0432	
...				
2				

FIG. 17

122

tblSaveProsthetics

OpNumber	Barcode	Description	Cost
1	PR1	Knee B,L	
2			

FIG. 18

120

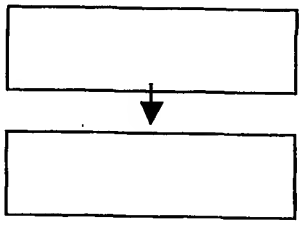
tblSaveStaff

Op Number	Staff Code	First Name	Surname	Title	Dept.	Rate
1	S1			Nurse	Theatre	
2						

FIG. 19

Calculate duration from tblSavePatients

Calculate staff cost based on duration from tblSaveStaff



130

FIG. 20

132

tblSaveTotals

Op No	Start	Fin.	Dur.	Staff	Ins.	Pros	Ass.	Reb.	I/C	Cons
1										
2										

FIG. 21

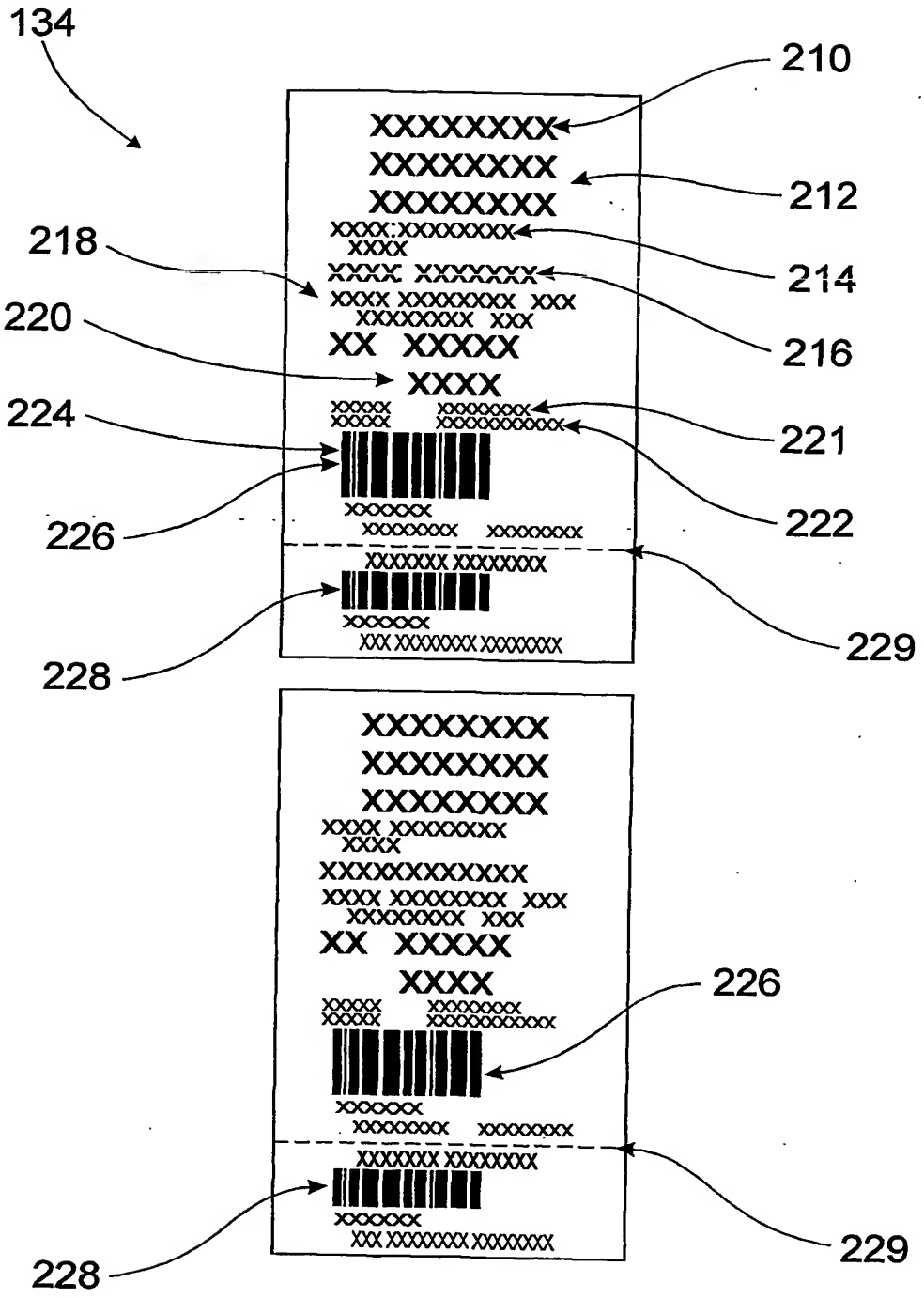


Fig. 22

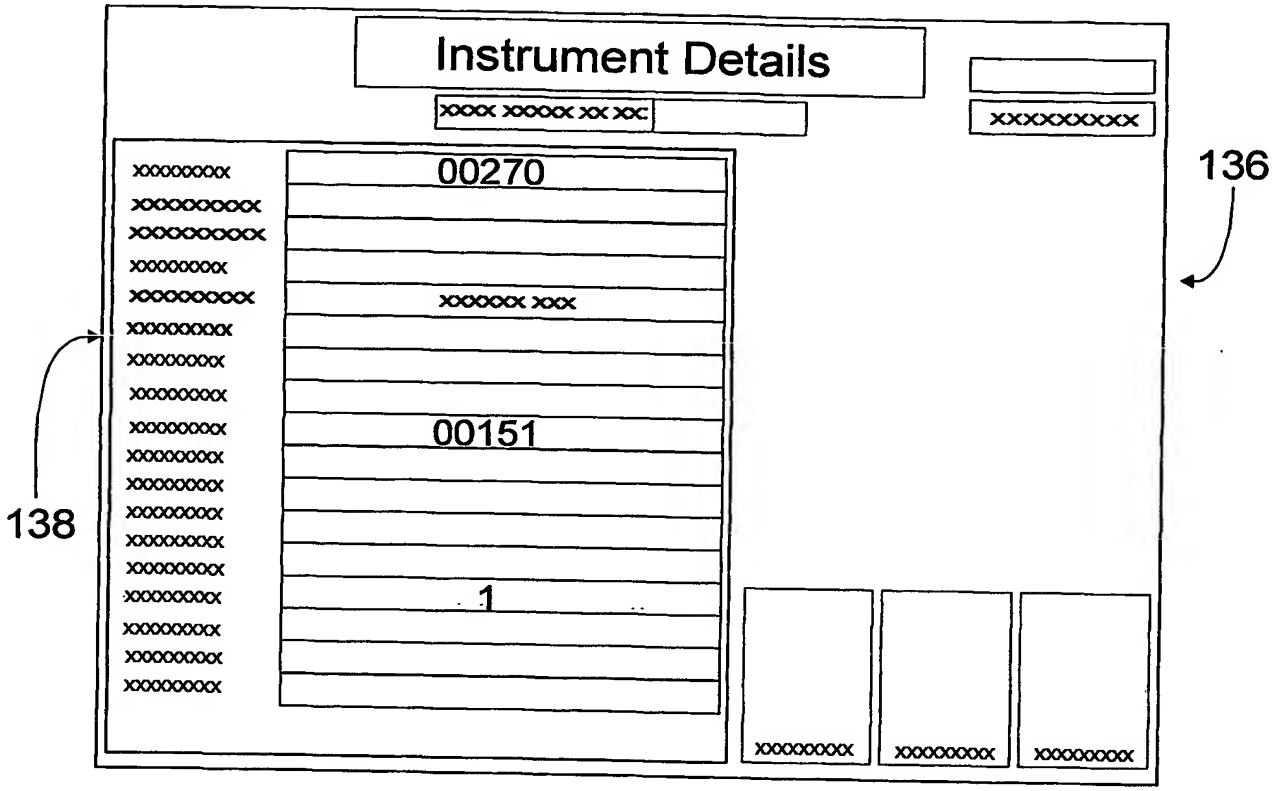

Instrument Details
xxxx xxxxx xx xx
xxxxxxxxx
136
138
00270
xxxxx xxx
00151
1

Fig. 23

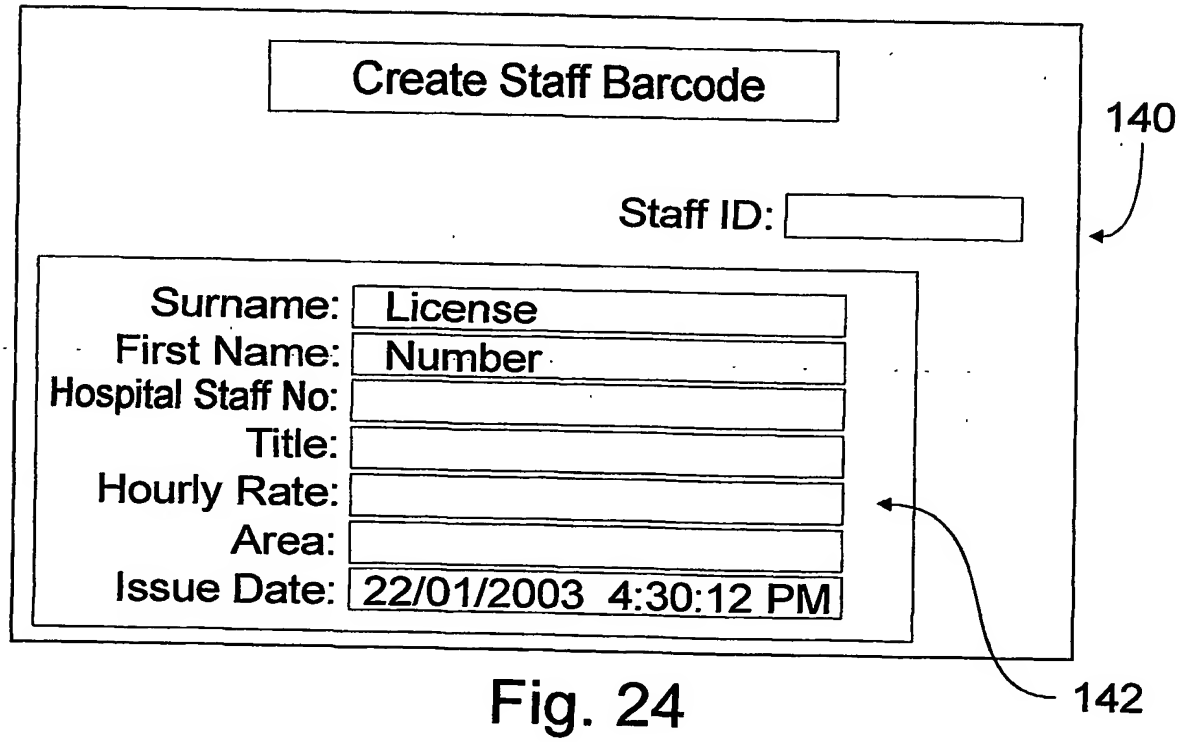

Create Staff Barcode
140
Staff ID:
Surname: License
First Name: Number
Hospital Staff No:
Title:
Hourly Rate:
Area:
Issue Date: 22/01/2003 4:30:12 PM
142

Fig. 24

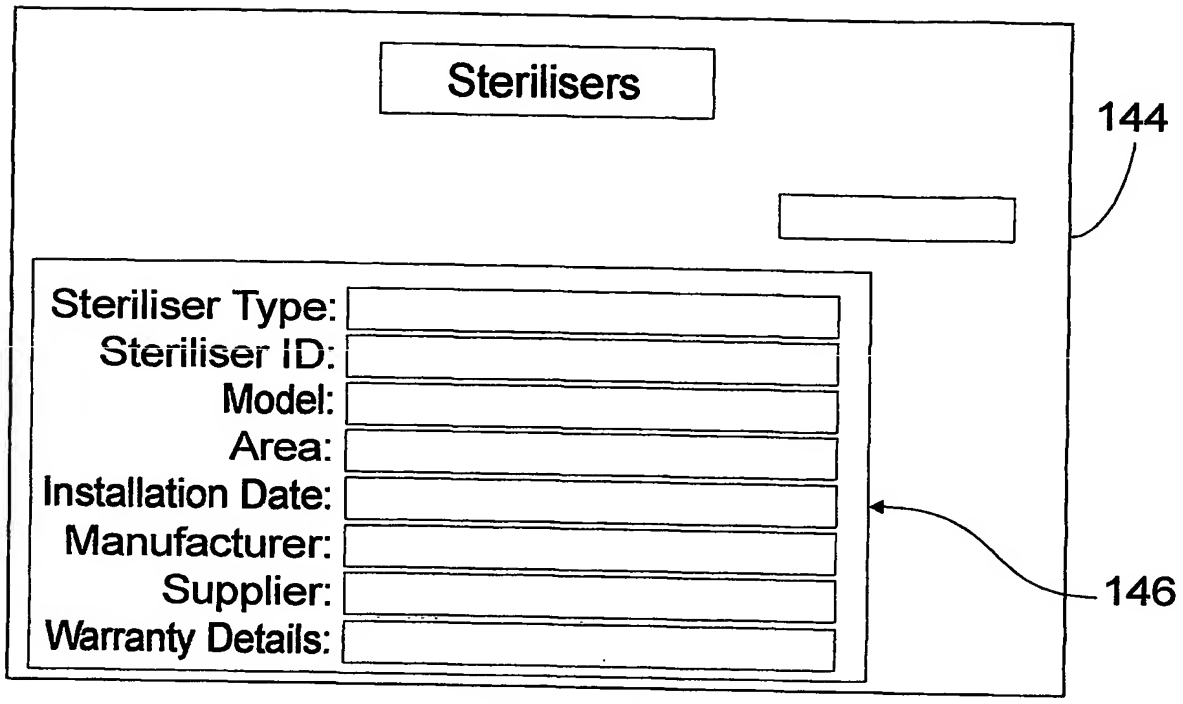

Sterilisers
144
Steriliser Type:
Steriliser ID:
Model:
Area:
Installation Date:
Manufacturer:
Supplier:
Warranty Details:
146

Fig. 25

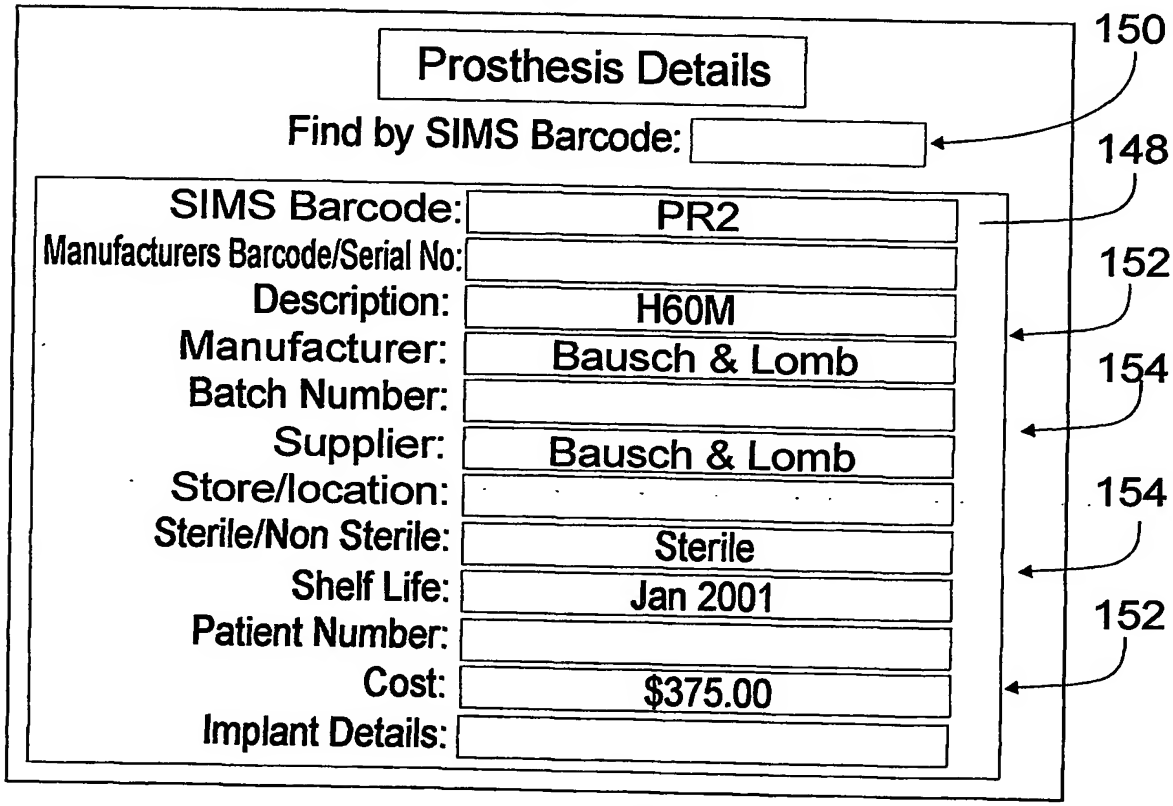

Prosthesis Details
150
Find by SIMS Barcode:
148
SIMS Barcode: PR2
Manufacturers Barcode/Serial No:
152
Description: H60M
Manufacturer: Bausch & Lomb
154
Batch Number:
Supplier: Bausch & Lomb
Store/location:
154
Sterile/Non Sterile: Sterile
Shelf Life: Jan 2001
Patient Number:
152
Cost: $375.00
Implant Details:

Fig. 26

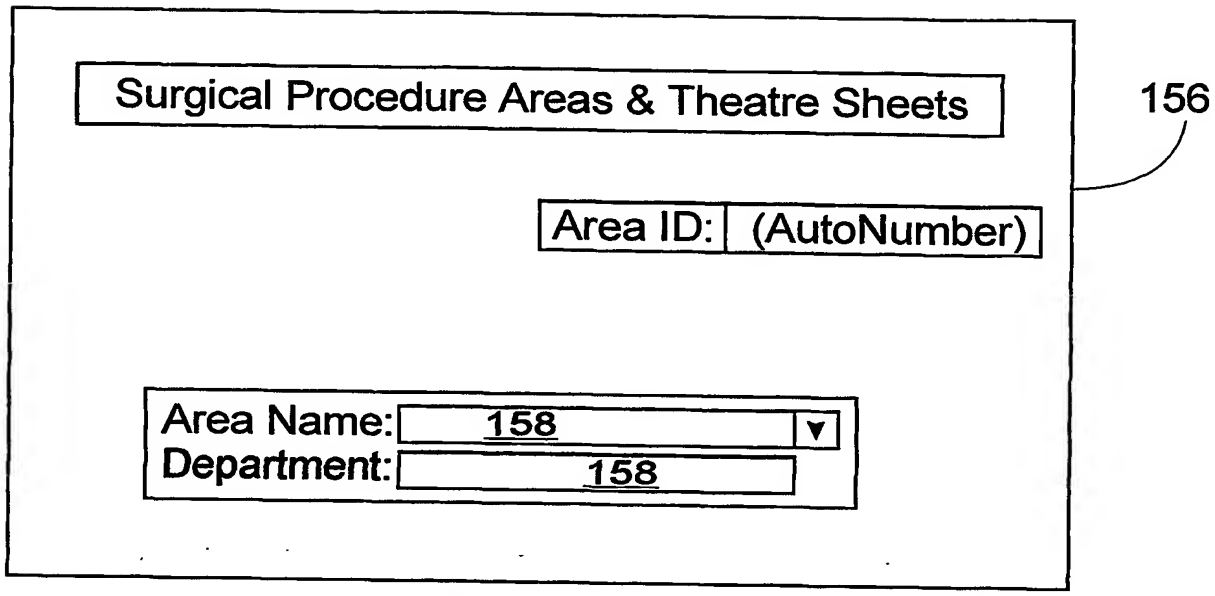

Surgical Procedure Areas & Theatre Sheets
156
Area ID: (AutoNumber)
Area Name: 158
Department: 158

FIG. 27

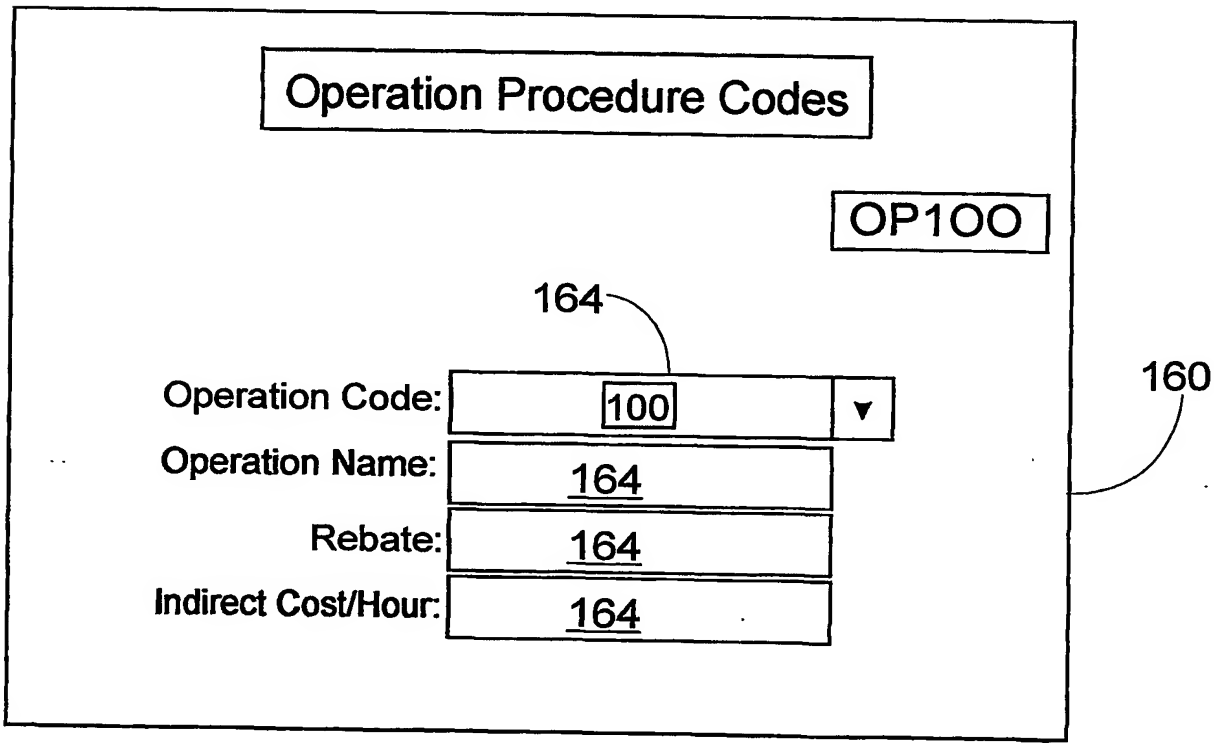

Operation Procedure Codes
OP100
164
160
Operation Code: 100
Operation Name: 164
Rebate: 164
Indirect Cost/Hour: 164

FIG. 28

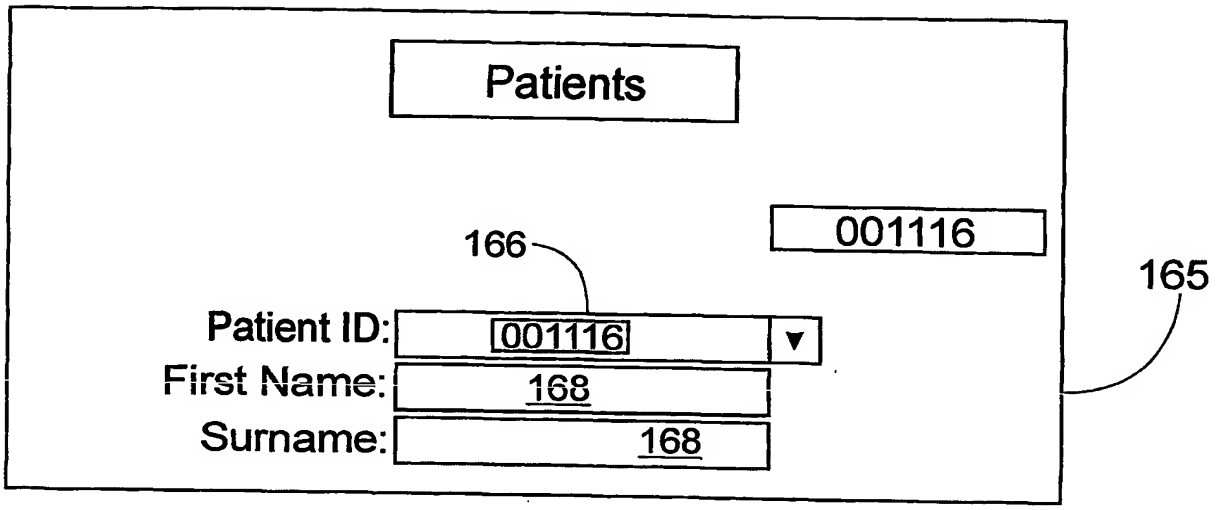

Patients
001116
166
165
Patient ID:
001116
First Name:
168
Surname:
168

FIG. 29

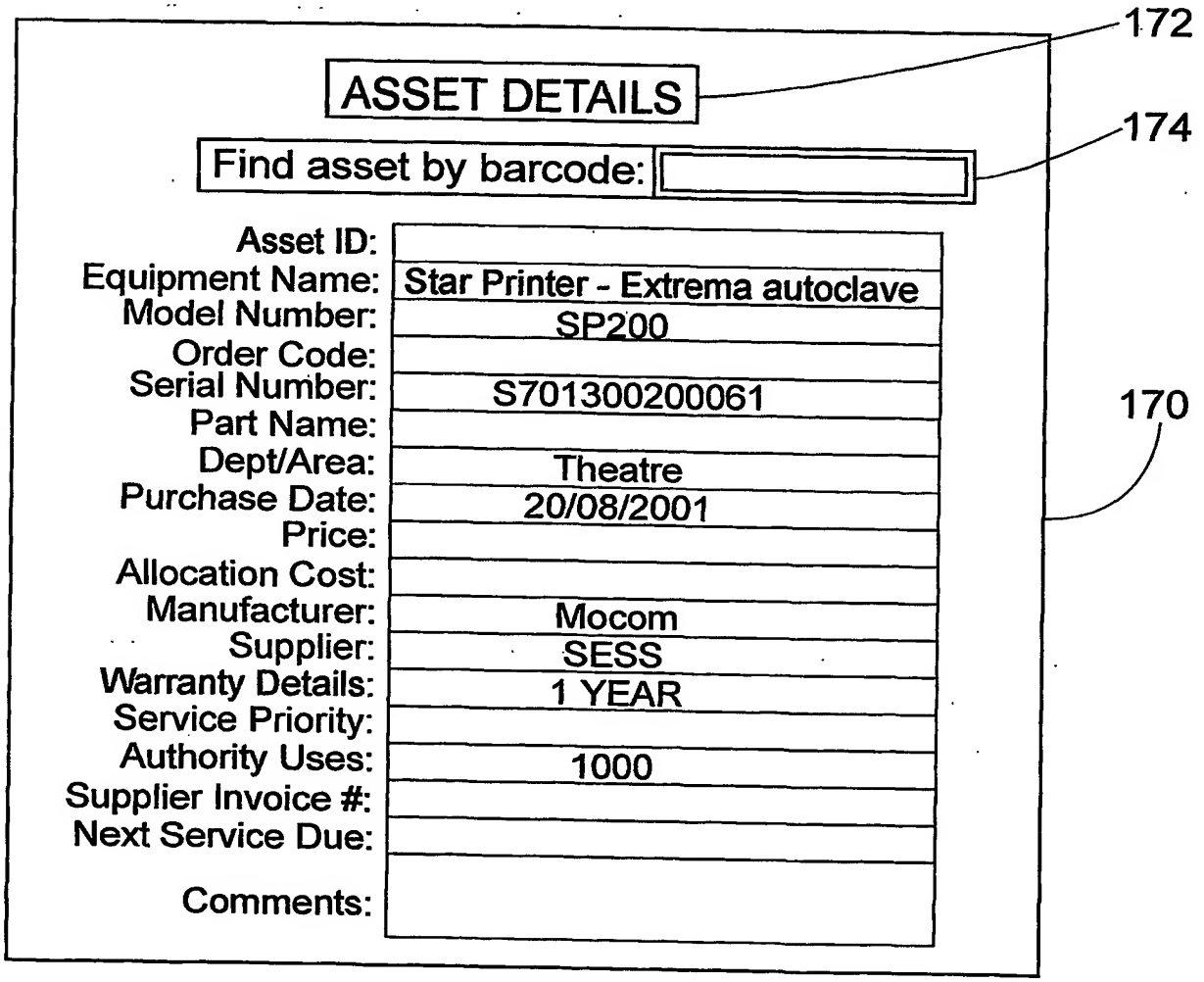

172
ASSET DETAILS
174
Find asset by barcode:
Asset ID:
Equipment Name:
Star Printer - Extrema autoclave
Model Number:
SP200
Order Code:
Serial Number:
S701300200061
Part Name:
Dept/Area:
Theatre
Purchase Date:
20/08/2001
Price:
Allocation Cost:
Manufacturer:
Mocom
Supplier:
SESS
Warranty Details:
1 YEAR
Service Priority:
Authority Uses:
1000
Supplier Invoice #:
Next Service Due:
Comments:
170

FIG. 30

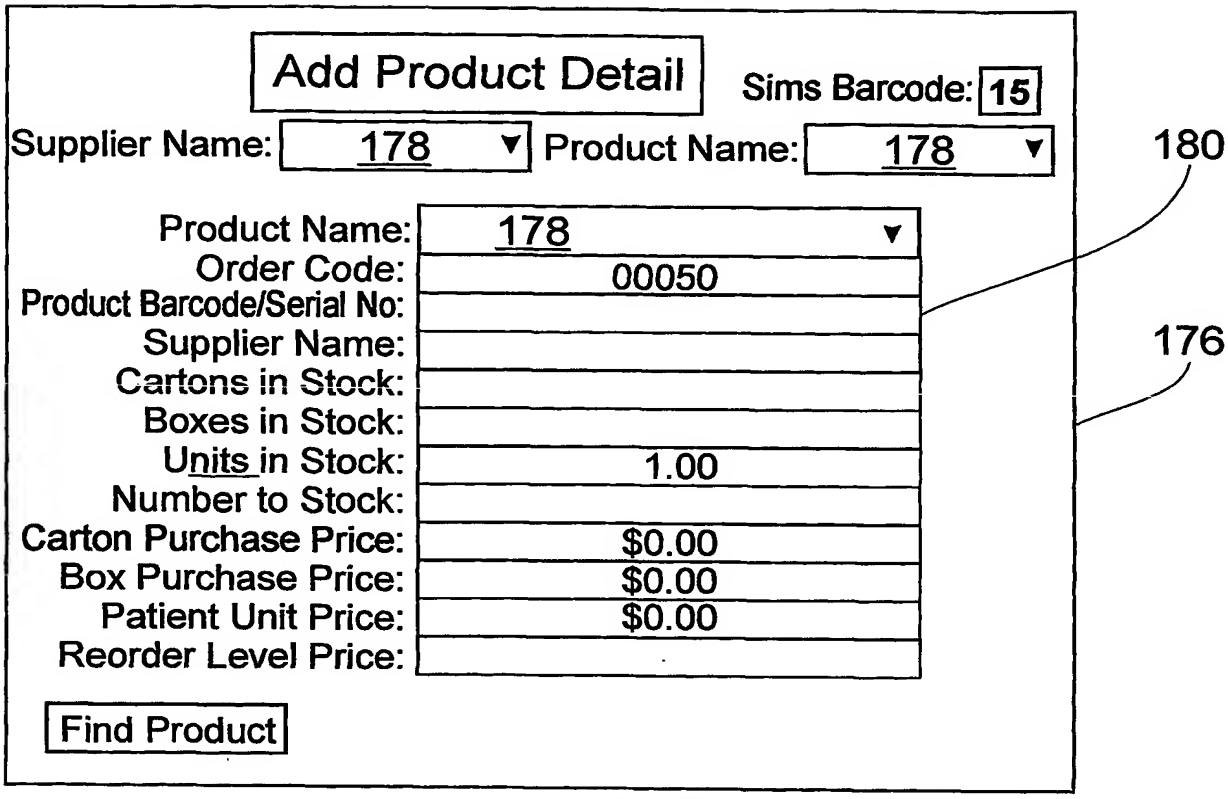

Add Product Detail
Sims Barcode: 15
Supplier Name: 178
Product Name: 178
180
Product Name: 178
Order Code: 00050
Product Barcode/Serial No:
Supplier Name:
Cartons in Stock:
Boxes in Stock:
Units in Stock: 1.00
Number to Stock:
Carton Purchase Price: $0.00
Box Purchase Price: $0.00
Patient Unit Price: $0.00
Reorder Level Price:
176
Find Product

FIG. 31

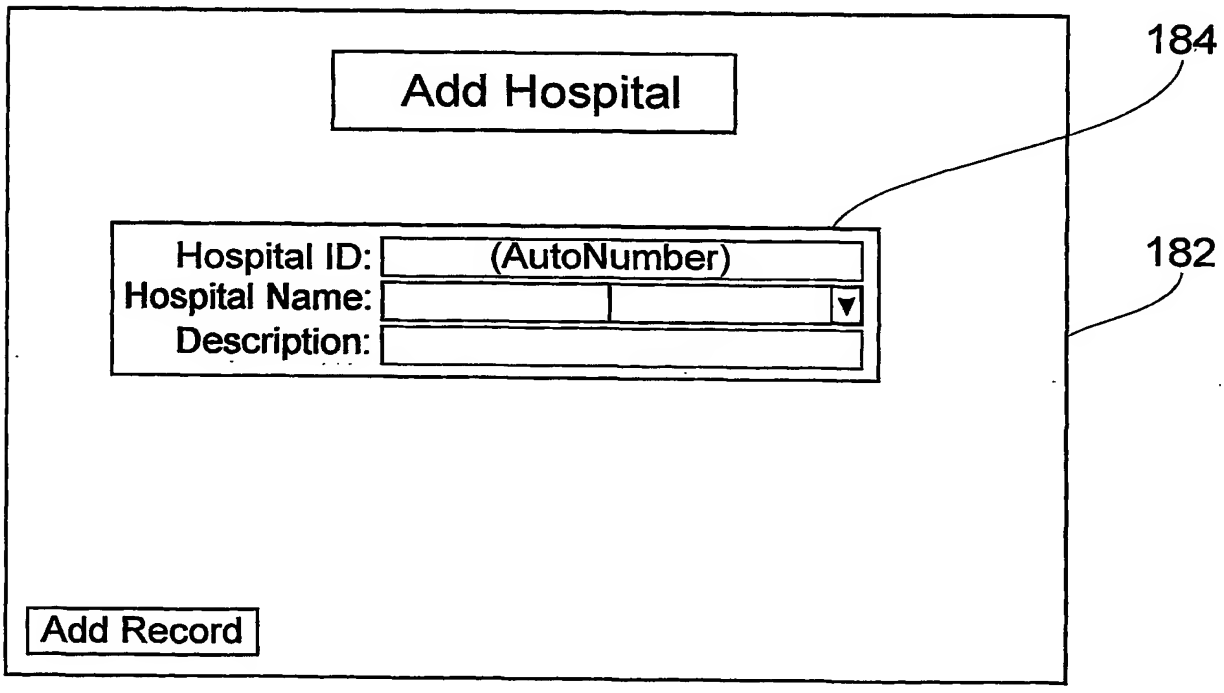

Add Hospital
184
Hospital ID: (AutoNumber)
Hospital Name:
Description:
182
Add Record

FIG. 32

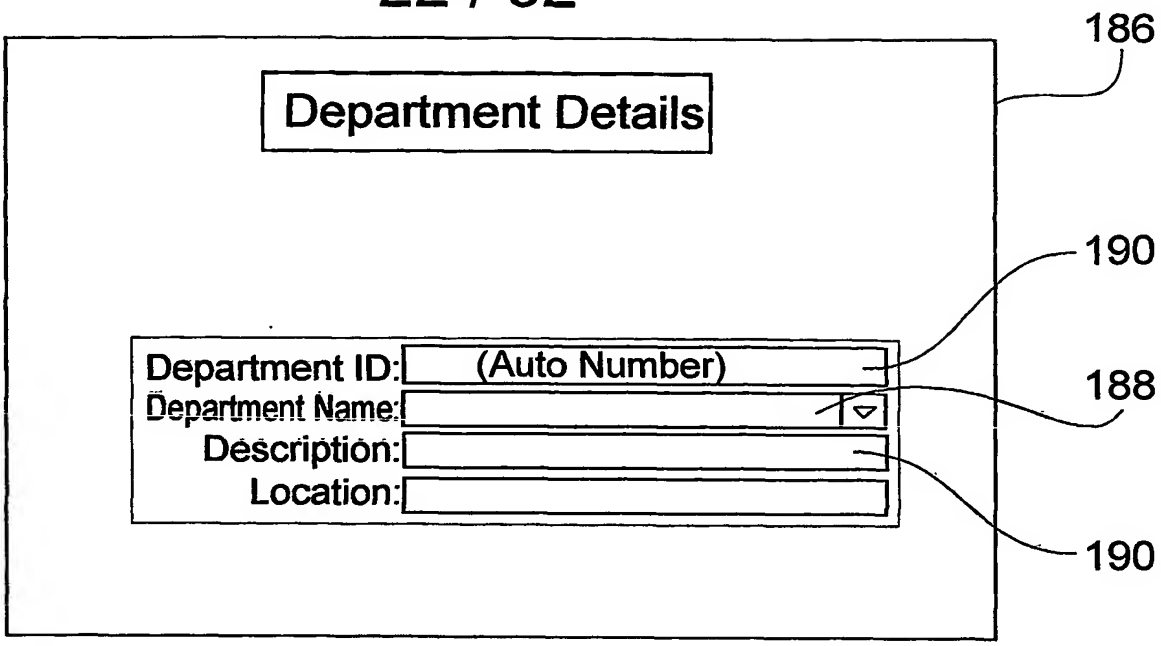

Department Details
186
190
Department ID: (Auto Number)
188
Department Name:
Description:
Location:
190

Fig. 33

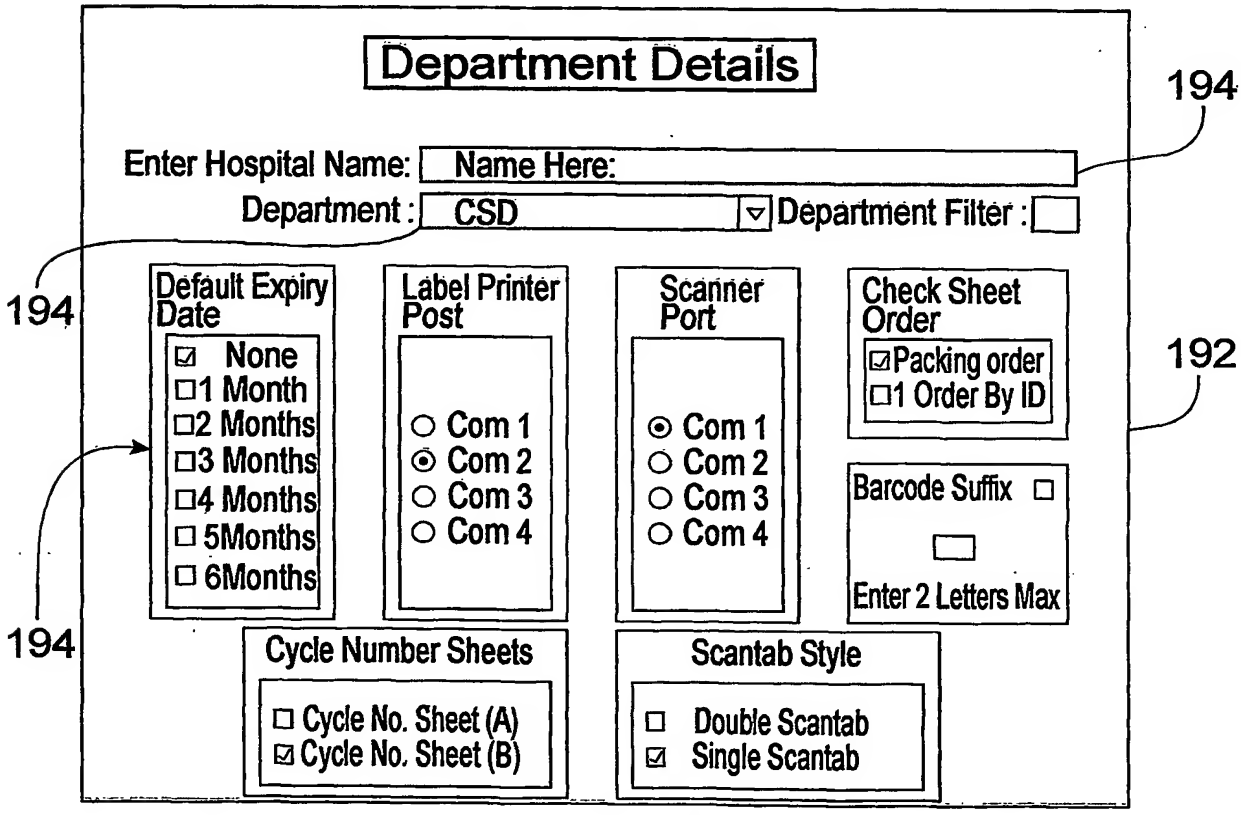

Department Details
194
Enter Hospital Name: Name Here:
Department : CSD
Department Filter :
194
Default Expiry Date
None
1 Month
2 Months
3 Months
4 Months
5Months
6Months
Label Printer Post
Com 1
Com 2
Com 3
Com 4
Scanner Port
Com 1
Com 2
Com 3
Com 4
Check Sheet Order
Packing order
1 Order By ID
192
Barcode Suffix
Enter 2 Letters Max
194
Cycle Number Sheets
Cycle No. Sheet (A)
Cycle No. Sheet (B)
Scantab Style
Double Scantab
Single Scantab

Fig. 34

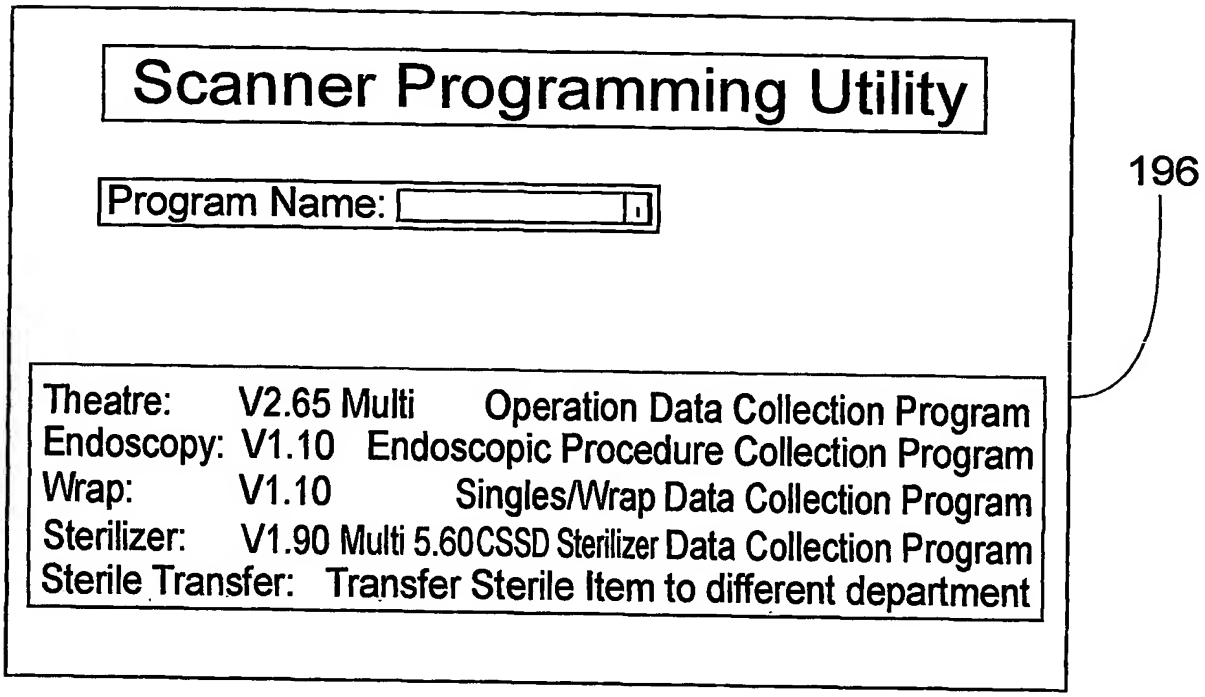

Scanner Programming Utility
Program Name:
196
Theatre: V2.65 Multi Operation Data Collection Program
Endoscopy: V1.10 Endoscopic Procedure Collection Program
Wrap: V1.10 Singles/Wrap Data Collection Program
Sterilizer: V1.90 Multi 5.60CSSD Sterilizer Data Collection Program
Sterile Transfer: Transfer Sterile Item to different department

FIG. 35

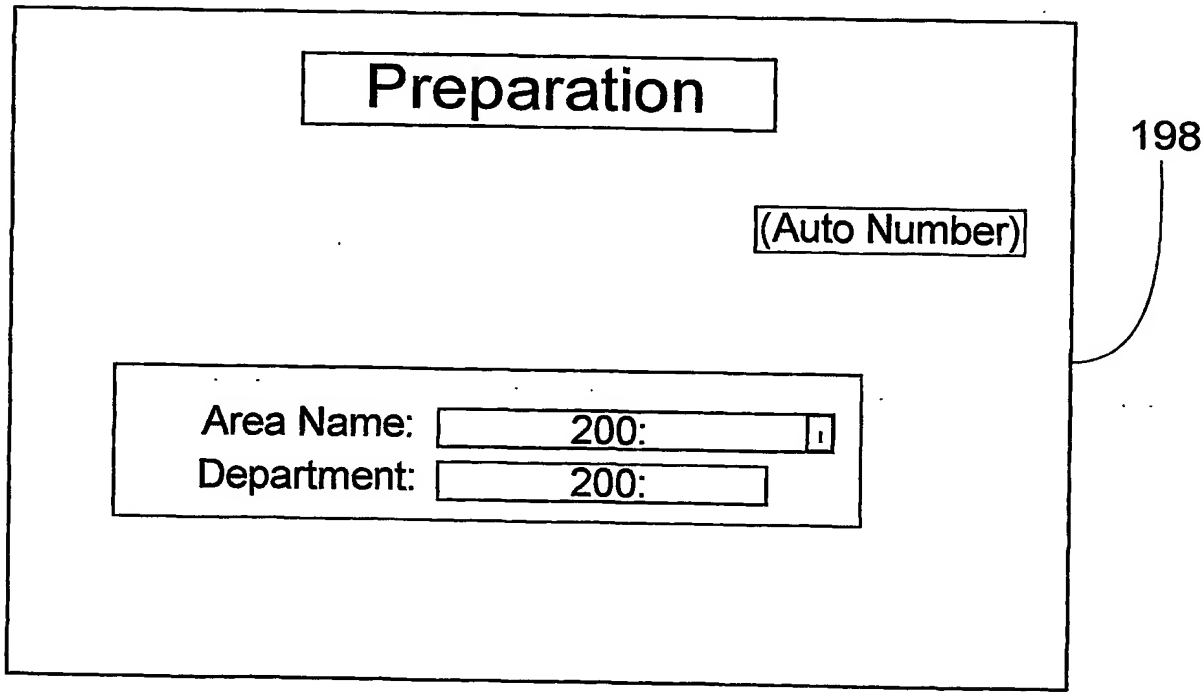

Preparation
198
(Auto Number)
Area Name: 200:
Department: 200:

FIG. 36

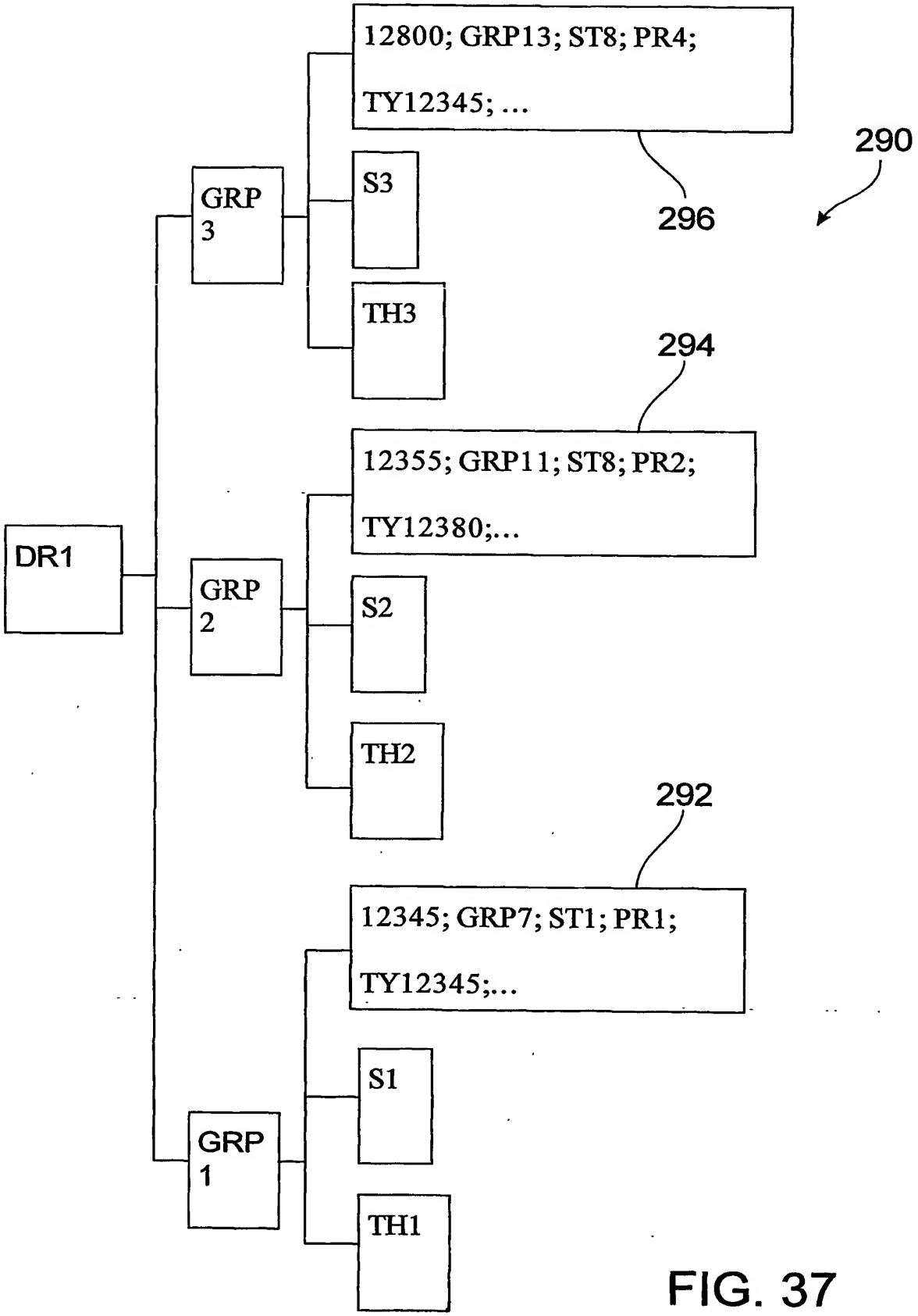

12800; GRP13; ST8; PR4;
TY12345; ...
290
296
S3
GRP
3
TH3
294
12355; GRP11; ST8; PR2;
TY12380;...
DR1
GRP
2
S2
TH2
292
12345; GRP7; ST1; PR1;
TY12345;...
S1
GRP
1
TH1

FIG. 37

GROUP SCANNING PROCEDURE

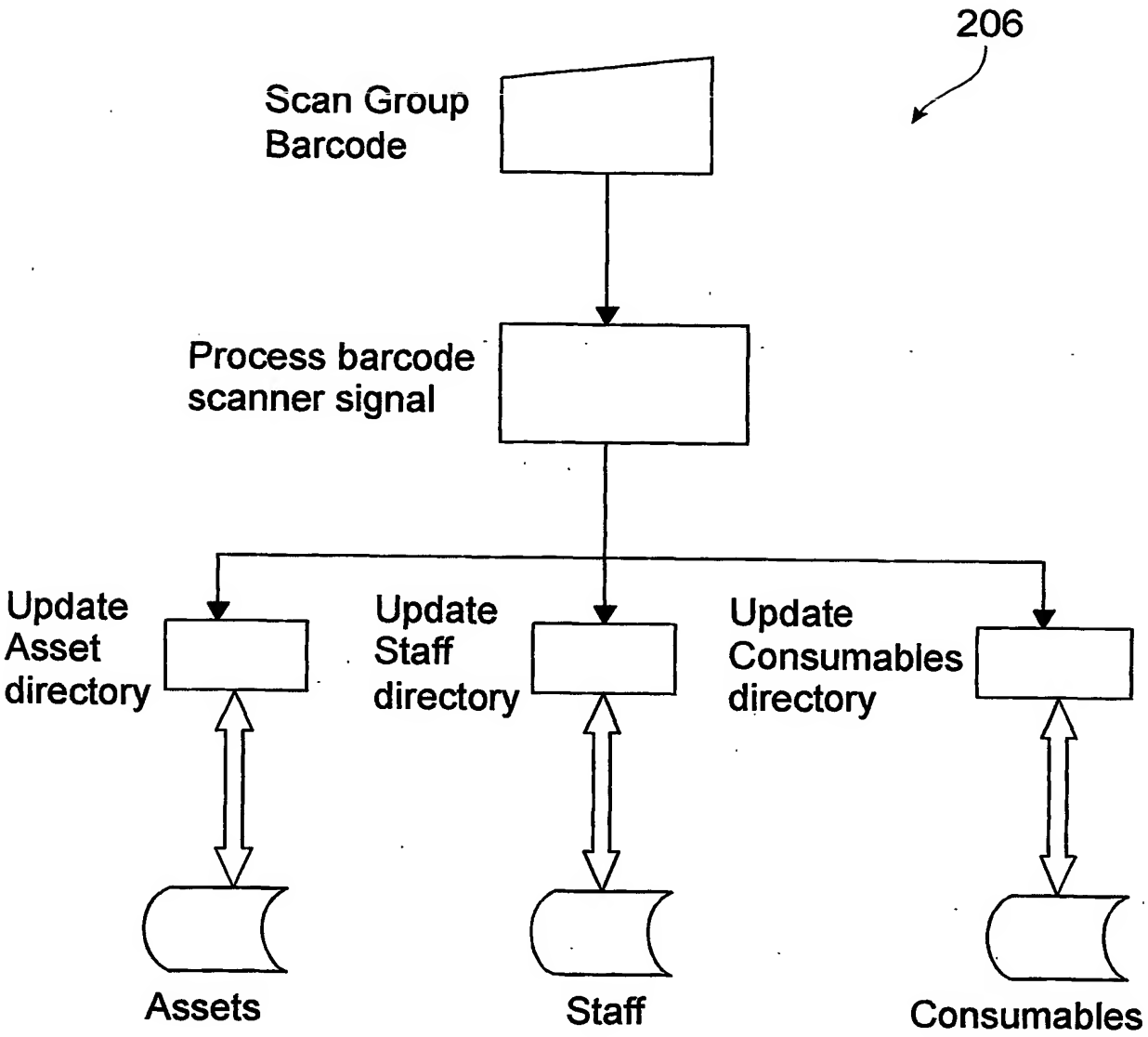


FIG. 38

DETAILS OF MEDICAL PRACTITIONER

202

Quantity	Item Name	Item Code
1	Emulsifier	AS3
1	Local Anaesthetic	57
1	Anaesthetic Machine	AS1
1	Staff Member 1	S5
1	Staff Member 2	S6
1	Balance Salt Solution 500 ml	459
1	Staff Member 3	S56
1	Betadine Antiseptic Solution	418
1	Eye Prod Oxybuprocaine Benoxinate 0.4%	86
1	Gloves Derma Prene Size 7	683
2	Injection Syringes 1ml Bare T/D Terumo	119
1	Injection Syringes 2ml Bare Slip Terumo	120
1	Staff Member 4	S20
1	Maxvac Basic Cat Pack	473
1	Microthins 6-1/2	223
1	Moller Wedel Microscope	AS4
1	Overshoe Cover Non-slip Elastic Blue 50 p/box	133
1	Soft fit Bouffant Cap Regular Celebration Print	288
1	Tape Hypoallergenic Micropore 25mm X 9.1mm	152

FIG. 39

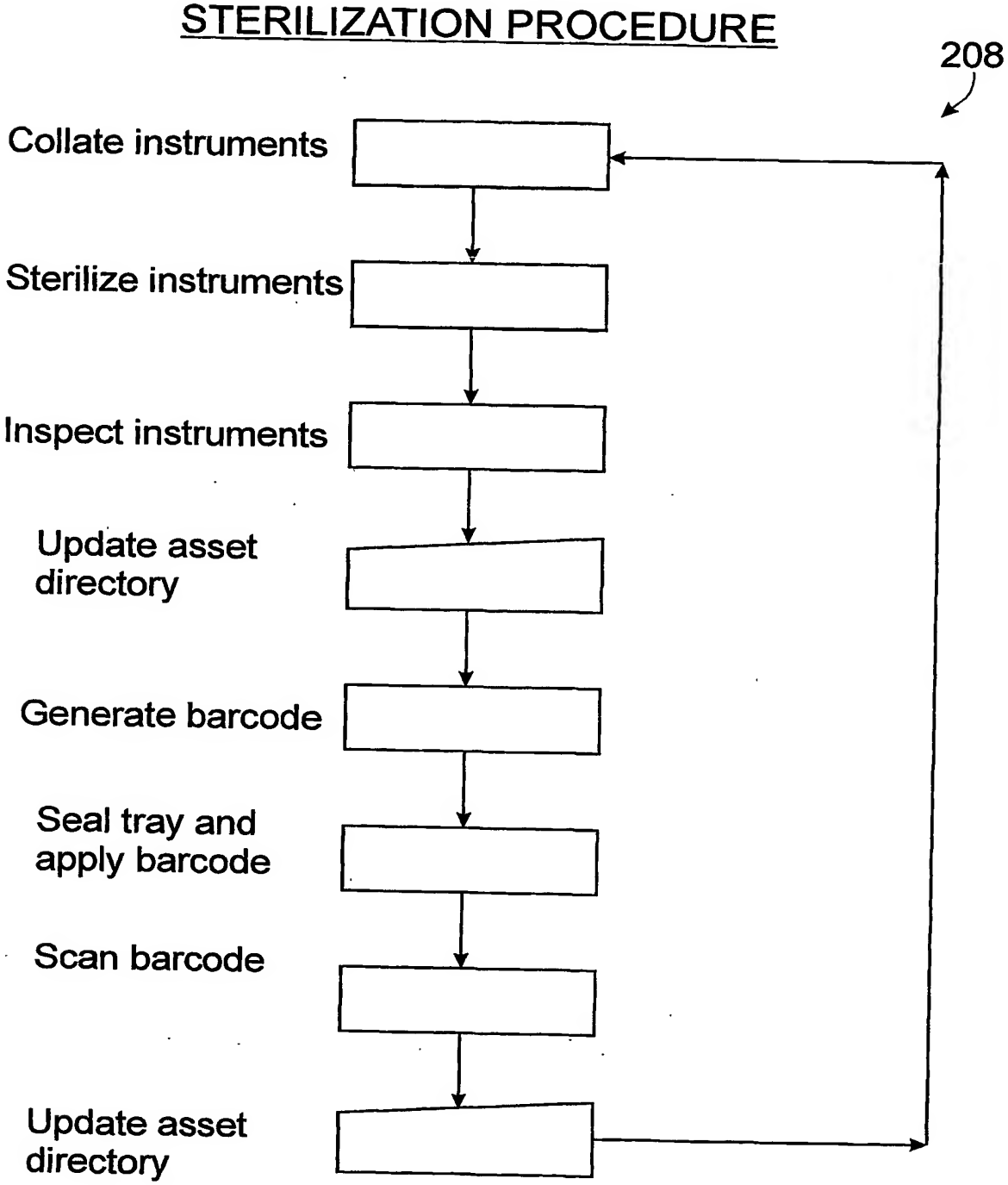

STERILIZATION PROCEDURE
208
Collate instruments
Sterilize instruments
Inspect instruments
Update asset directory
Generate barcode
Seal tray and apply barcode
Scan barcode
Update asset directory

FIG. 40

EXAMPLEHOSP1 - Check Sheet 21/01/2003 13:09:26

Tray Name: GENERAL 1

TY318260

Item	Subs	ID	Instrument Name	S	1	2	3	4	5
1		00021	Retractor Mathieus						
2		00022	Retractor Mathieus						
3		00057	Scalpel Handle B P 4						
4		00058	Scalpel Handle B P 3						
5		00059	Scalpel Handle B P 4						
6		00010	Forcep Tissue Lanes Toothed Med						
7		00019	Forcep Tissue Lanes Toothed Small						
8		00055	Forcep Tissue Non Toothed Med						
9		00056	Forcep Tissue Non Toothed Small						
10		00024	Forcep Tissue Gillies Toothed						
11		00011	Forcep Tissue Beard Packing						
12		00060	Probe Listers Silver						
13		00049	Sponge Holder						
14		00017	Sponge Holder						
15		00012	Forcep Artery Rochester Pean						
16		00013	Forcep Artery Rochester Pean						
17		00014	Forcep Artery Rochester Pean						
18		00015	Forcep Artery Rochester Pean						
19		00025	Forcep Artery Rochester Pean						
20		00026	Forcep Artery Rochester Pean						
21		00028	Forcep Artery Rochester Pean						
22		04922	Forcep Artery Rochester Pean						
23		00050	Forcep Artery Rochester Pean						
24		00018	Forcep Artery Rochester Pean						
25		00034	Forcep Artery Criles Straight						
26		00039	Forcep Artery Criles Straight						
27		00030	Forcep Artery Criles Curved						
28		00031	Forcep Artery Criles Curved						
29		00032	Forcep Artery Criles Curved						
30		00033	Forcep Artery Criles Curved						
31		00035	Forcep Artery Criles Curved						
32		04052	Forcep Artery Criles Curved						
33		00045	Forcep Artery Criles Curved						
34		00047	Forcep Artery Criles Curved						
35		00042	Forcep Tissue Allis						

FIG. 41A

EXAMPLEHOSP1 - Check Sheet

21/01/2003 13:09:26

Tray Name: GENERAL 1

TY318260

Item	Subs	ID	Instrument Name	S	1	2	3	4	5
37		00044	Forcep Tissue Allis						
38		00009	Forcep Tissue Moynihan						
39		00037	Forcep Tissue Moynihan						
40		00048	Forcep Tissue Moynihan						
41		00053	Forcep Tissue Moynihan						
42		00038	Forcep Tissue Babcock						
43		00040	Forcep Tissue Babcock						
44		00041	Forcep Tissue Babcock						
45		02735	Forcep Tissue Babcock						
46		00004	Needle Holder Hagar 8in						
47		00027	Needle Holder Hagar 8in						
48		00036	Needle Holder Hagar 8in						
49		00020	Needle Holder Hagar 7in						
50		00054	Scissor Metzenbaum Curved 7in						
51		00006	Scissor Mayo Straight						
52		00051	Scissor Mayo Straight						
53		00003	Towel Clip sharp						
54		00005	Towel Clip sharp						
55		00007	Towel Clip sharp						
56		04053	Towel Clip sharp						
57		00052	Towel Clip sharp						
58		04054	Towel Clip sharp						
59		NIL01	Quiver						
60		00016	Suction Tube Pooles (2 parts)						

Comments:

SET UP: MEDIUM RECTANGLE TRAY
CHECK LIST
STEAM INDICATOR
WRAP INNER TD2 PARCEL WRAP
OUTER 100X100cm CREPE PAPER PARCEL WRAP

Date:					
Count:					
Signed:					

Sub Count:	0
Instrument Count:	59

FIG. 41B

270

Patient Theatre Records

Patient: UR007283
Theatre: O.T. 1
Start: 22/11/2001 09:55:00 **Finish:**22/11/2001 10:15:00 **Duration:** 00:20:00

Staff:

272

Staff Code	Surname	Title	Cost
S10		RN	
S10		EN	
S10			
S10		RN	
S10			
			$

Sterile Items:

274

Item Number	Item Name	Allocation Cost	Process Cost
TY29013		$	$
TY29012		$	$
TY29011		$	$
		$	$
			$

Prosthetics:

276

Barcode	Description	Cost
PR3151	AR40 - 17.OD	$ 0.00
		$ 0.00

Equipment:

278

AMS Barcode	Equipment Name	Allocation Cost
AS1	Anaesthetic Machine	
AS3	Alcon Phaco Emulsifier	
AS4	Moller - Wedel Microscope	
		$

Procedures:

280

ID	Procedure Name	Rebate	Indirect Cost
OP100	Phaco & IOL - Medibank	$	$
		$	$

FIG. 42A

270

Patient Theatre Records

Patient: UR007283
Theatre: O.T. 1
Start: 22/11/2001 09:55:00 **Finish:**22/11/2001 10:15:00 **Duration:** 00:20:00

282

Consumables:

ID	Consumable Name:	Cost
57	Anaes Local Xylocaine Plain 1% (50x5ml) S4	$
86	Eye Prod Minims Oxybuprocaine Benoxinate 0.4% S4	$
119	Injection Syringes 1ml Bare T/D Terumo	$
119	Injection Syringes 1ml Bare T/D Terumo	$
120	Injection Syringes 2ml Bare Slip Terumo	$
133	Overshoe Cover Non-slip Elastic Blue 50 p/box	$
152	Tape Hypoallergenic Micropore 25mm X 9.1mm	$
223	Microthins 6-1/2	$
288	Soft fit Bouffant Cap Regular Celebration Print	$
298	Ansell Powderless Gloves Microthin Size 8	$
418	Betadine Antiseptic Solution (Brown BT)	$
459	Balance Salt Solution 500 ml	$
473	Maxvac Basic Cat Pack	$
616	Gentamycin 80mg/2ml	$
617	Vancomycin vial 0.5mg	$
		$

Total Costs:	$
Rebate:	$
Profit Margin:	$

284

FIG. 42B

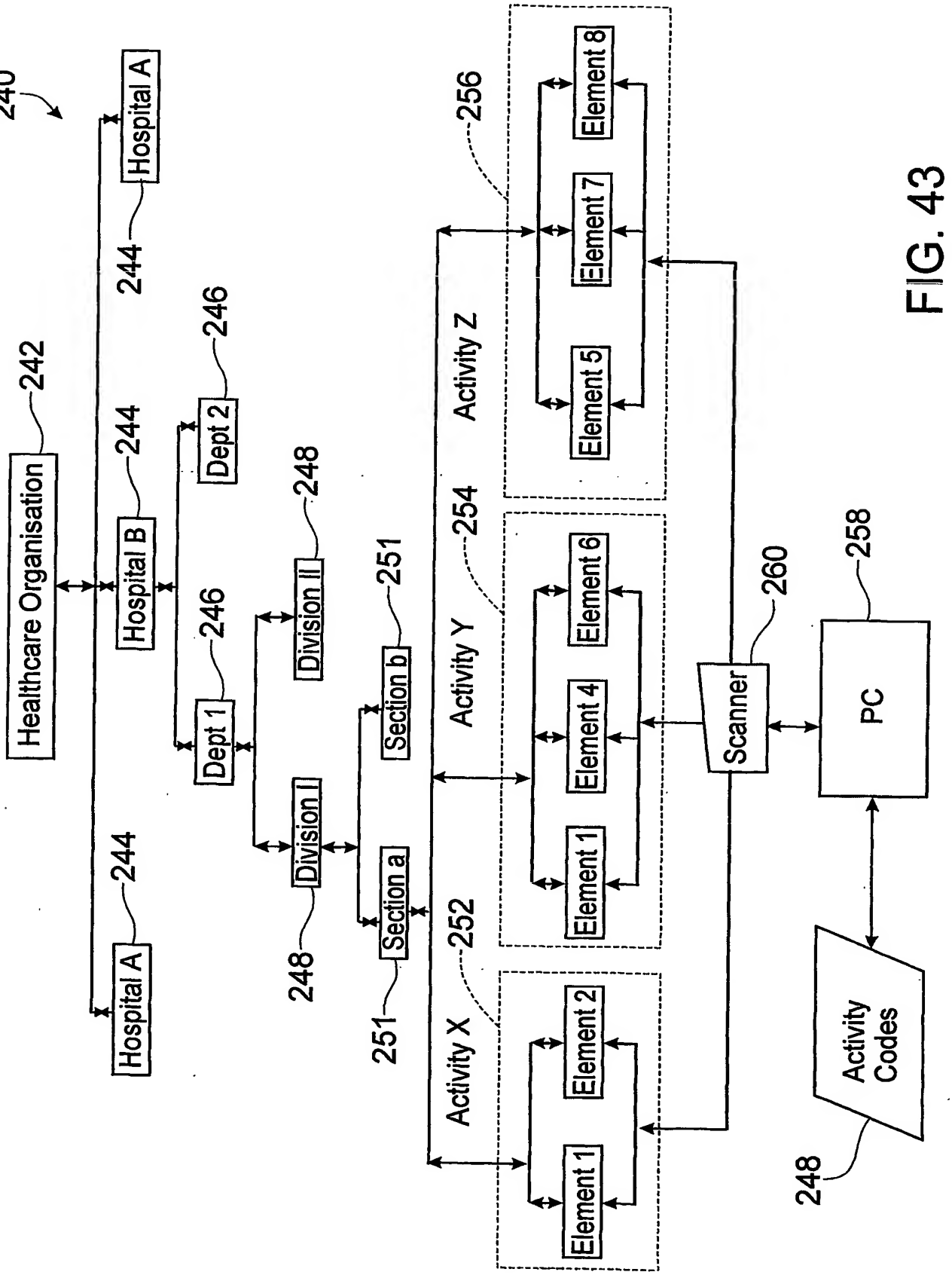

240
Healthcare Organisation
242
Hospital A
Hospital B
Hospital A
244
244
244
Dept 1
Dept 2
246
246
Division I
Division II
248
248
Section a
Section b
251
251
Activity X
Activity Y
Activity Z
252
254
256
Element 1
Element 2
Element 4
Element 6
Element 5
Element 7
Element 8
Scanner
260
PC
258
Activity Codes
248

FIG. 43